

عنوان مقاله:

Does a Course of Aerobic Training Affect the Inflammatory Status and Cardiometabolic Risk Factors of Hookah-smoker Women? Results of a Cross-sectional Study

محل انتشار:

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خلاصه مقاله:

Background: Hookah consumption is a major risk factor for inflammation and cardiovascular diseases (CVDs). The aim of this study was to evaluate the effects of two-month aerobic training on metabolic profile and serum C-reactive protein (CRP) levels in hookah-smoker women. **Methods:** In this quasi-experimental study with a pretest-posttest design, 22 hookah-smoker women (at least twice a week) matched in terms of age (27.82 ± 3.81 years) and body mass index (BMI) (26.66 ± 5.92 kg/m²) were recruited and randomly divided into two groups of smokers + aerobic exercise ($n = 11$) and smokers ($n = 11$). A matched control group of non-smoker women ($n = 10$, age: 27.11 ± 2.71 years, BMI: 26.20 ± 2.39 kg/m²) were also recruited for baseline comparison. The aerobic exercise program was performed three days a week, 35-50 minutes a day for 8 weeks. The smokers' group were asked to continue their normal lives. Serum levels of CRP and metabolic risk factors were measured before and after the intervention. Data were analyzed using repeated measures analysis of variance (ANOVA). **Findings:** At baseline, non-smoker participants had significantly better CRP level ($P = 0.001$) and maximal oxygen consumption (VO₂max) ($P = 0.020$) than hookah-smoker women. After 8 weeks of aerobic exercise, no significant change was observed in the lipid profile of hookah-smoker women ($P > 0.050$). Simultaneously, body weight ($P = 0.030$), VO₂max ($P = 0.001$), and CRP levels ($P = 0.010$) improved significantly in response to aerobic exercise. **Conclusion:** These findings suggest that a course of aerobic exercise program improves the aerobic fitness of hookah-smoker women. This improvement is associated with reduction of CRP without significant changes in plasma lipid profile.

کلمات کلیدی:

Exercise, Inflammation, Water pipe smoking, Women

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