

عنوان مقاله:

The Effect of Aerobic Training and Coriander Seed on Oxidative Stress and Mitochondrial Function Markers in Lung Tissue of Rats Exposed to H_2O_2

محل انتشار:

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خلاصه مقاله:

Background: Exposure to hydrogen peroxide (H_2O_2) in addition to increase in the oxidative stress can alter mitochondrial function. The present study aimed to investigate the effect of training with coriander seed consumption on mitochondrial function and oxidative stress markers in the lung tissue of rats exposed to H_2O_2 . Methods: Thirty-five rats were divided into 7 groups, including (i) saline healthy control, (ii) saline toxic control, (iii) coriander toxic control (500 mg/kg), (iv) coriander toxic control (1000 mg/kg), (v) coriander toxic training (500 mg/kg), (vi) coriander toxic training (1000 mg/kg), and (vii) saline toxic training groups. During eight weeks, groups 2-7 received 1 mmol/kg H_2O_2 for three times per week and groups 5-7 performed training three sessions per week. Results: Training and coriander significantly increased adenosine triphosphate (ATP) and decreased caspase-3, cytochrome-C, O-6- methylguanine-DNA methyltransferase (MGMT) and prealbumin (PAB) ($p \leq 0.05$). Also, interactive effects of training and coriander on increase of ATP and decrease of caspase-3, cytochrome-C, and PAB at a dose of 1000 mg/kg were higher than 500 mg/kg ($p \leq 0.05$). Conclusion: Although training and coriander alone could enhance the mitochondrial function and oxidative stress markers, training simultaneously with coriander had more favorable effects compared to each one alone.

کلمات کلیدی:

Training, Coriander, Oxidative stress, Lung, H_2O_2

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