

عنوان مقاله:

Lipid- lowering Effects of Endurance Training and Cinnamon Extract in Streptozotocin- Induced Diabetic Rats

محل انتشار:

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خلاصه مقاله:

Introduction: Diabetes is a disease caused by a lack of insulin secretion or a decrease in tissue sensitivity to insulin. The aim of this study was to investigate the lipid-lowering effects of endurance training (ET) with cinnamon (C) extract in streptozotocin (STZ)-induced diabetic rats. Methods: Thirty-two diabetic rats were divided into four groups of 8 rats, including 1) cinnamon, 2) training, 3) training+cinnamon and 4) sham groups. During four weeks, groups 1 and 3 received daily 100 mg/kg C perennially, and groups 2 and 3 ran on treadmill five times per week for 60 minutes each session at a speed of 8 to 16 m/min. Data were analyzed using paired sample t test and one way ANOVA and Tukey's post-hoc tests ($p \leq 0.05$). Results: cinnamon, training and training+cinnamon significantly reduced TG, LDL and VLDL levels as well increased HDL ($P=0.001$) in compare with sham group, training+cinnamon significantly reduced Cho and VLDL ($P=0.001$) in compare with sham group; training+cinnamon had more effect on decrease of Cho ($p=0.02$) and LDL ($p=0.002$) as well as increase of HDL ($P=0.004$) rather than training. Also cinnamon ($P=0.03$) and training ($P=0.04$) significantly reduced VLDL in compare with sham group. Conclusions: Although training and cinnamon have lipid-lowering effect in diabetic rats, nevertheless it seems training simultaneously with cinnamon administration has better effect on improving lipid profile compare to training alone.

کلمات کلیدی:

Diabetes Mellitus, Cinnamomum zeylanicum, Lipids, Exercise, Endurance training

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