

عنوان مقاله:

The Effect of Eight Weeks of Endurance Training with Saffron on Cytochrome C and Calmodulin Kinase γ on the (Heart Tissue of Alzheimer's Rats Treated With Trimethyl Tin (TMT

محل انتشار:

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خلاصه مقاله:

Introduction: A proper diet and physical activity benefit Alzheimer's disease (AD). Therefore, this study aimed to evaluate the impact of endurance training (ET) with saffron (Sa) consumption on cytochrome C and calmodulin kinase γ in the heart tissue of AD rats. **Methods:** In this experimental study, 40 rats (AD induced by intraperitoneal 4mg/kg trimethyl tin) were divided into five groups of eight animals comprising: (1) AD, (2) Endurance training (ET), (3) saffron (Sa), (4) ET+Sa, and (5) sham (Saffron solvent) groups. The ET and ET+Sa groups ran on a treadmill at 15 to 20m/min (three sessions a week for eight weeks), each lasting 15 to 30 minutes. In addition, the Sa and ET+Sa groups were given 20mg/kg saffron extract per day. The Shapiro-Wilk test, one-way ANOVA, and Tukey's post hoc tests were used to analyze the data ($P \geq 0.05$). **Results:** ET, Sa, and ET+Sa significantly decreased cytochrome C and calmodulin kinase γ ($P \geq 0.05$). In addition, ET+Sa significantly reduced calmodulin kinase two more than training ($P = 0.04$). **Conclusion:** Based on the results, Training and saffron consumption appear to have the same impacts on reducing cytochrome C and calmodulin kinase γ . However, simultaneous training and saffron consumption can improve the gene expression levels of calmodulin kinase γ .

کلمات کلیدی:

Alzheimer's disease (AD), Cytochrome c, Calmodulin kinase γ , Saffron consumption, Endurance training

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