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The effects of aerobic training on the il-17 and ifn- γ expression in the hippocampus of male wistar rats with alzheimer disease**Hamid Amini***Institute of Higher Education, Iran*

The purpose of this study was to investigate the effect of 4 weeks aerobic training on the expression of IL-17 and IFN- γ in hippocampus of rats with Alzheimer's disease induced by amyloid beta injection. The 21 adult male Wistar rats were randomly divided into 3 groups of control (CG), Alzheimer's, (AG) and Alzheimer's+aerobic training (AAG). Beta amyloid oligomers were used to induce Alzheimer's disease in the hippocampus. A week after Alzheimer's induction, rats of the AAG group performed exercise 5 days in week for 4 weeks. In the first and second weeks, the training session consisted of two 15-minute sets with speed 10 m/m and a 5-minute rest between sets. In the third and fourth weeks, the speed increased to 15 m/min and the number of sets to three and four 15 minutes, respectively (with 5-minute rest between sets). After 4 weeks, hippocampal isolation from all rats and was used to evaluate cytokines gene expression. One-way analysis of variance (ANOVA) followed by bonferroni's test were used for groups analysis ($P \leq 0.05$). The results showed that IFN- γ gene expression was significantly lower in AAG group than AG group and significantly higher in the AAG and AG groups than CG group ($P \leq 0.05$). Also, IL-17 gene expression was significantly lower in the AAG than AG group. While the IL-17 expression was significantly higher in the AG group than the CG group, there was no significant difference between the AAG and CG groups ($P \leq 0.05$).

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