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The Effect of 8 Weeks Endurance Training and L-NAME on Apelin in Adipose Tissue, Glucose and Insulin in Elderly Male's Rats

Authors : Asieh Abbassi Daloii, Fatemeh Fani, Ahmad Abdi

Abstract : Objective: The aim of this study was to determine the effect of 8 weeks endurance training and L-NAME on apelin in adipose tissue, glucose and insulin in elderly male's rats. Methods: For this purpose, 24 vistar elderly rats with average 20 months old purchased from Razi Institute and transferred to Research Center were randomly divided into four groups: 1. control, 2. training, 3.training and L-NAME and 4. L-NAME. Training protocol performed for 8 weeks and 5 days a week with 75-80 VO2 max. All rats were killed 72 hours after the final training session and after 24 hours of fasting adipose tissue samples were collected and kept in -80. Also, Data was analyzed with One way ANOVA and Tucky in $p < 0/05$. Results: The results showed that the inhibition of nitric oxide on apelin in adipose tissue of adult male rats after eight weeks of endurance training increased significantly compared to the control group ($p < 0.00$). Also, the results showed no significant difference between the levels of insulin and glucose groups. Conclusion: It is likely that the increased apelin in adipose tissue in mice independent of insulin and glucose.

Keywords : endurance training, L-NAME, apelin in adipose tissue, elderly male rats
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