

عنوان مقاله:

The Effect of Eight Weeks of Aerobic Exercises on Visfatin, IL-6 and TNF- α in Female Sprague Dawley Rats

محل انتشار:

مجله علمی پژوهشی دانشگاه علوم پزشکی زنجان، دوره 21، شماره 89 (سال: 1392)

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خلاصه مقاله:

Background and Objective: Adipose tissue is an endocrine organ with the ability to produce and release a variety of cytokines such as free fat acid, leptin, adiponectin, visfatin, tumor necrosis factor alpha (TNF- α) and interleukin-6 (IL-6). The purpose of this study was to investigate the probable changes in visfatin, IL-6 and TNF- α on female rats after 8 weeks of intense aerobic exercises. **Materials and Methods:** This experimental study was conducted on 45 sprague dawley rats with mean age of 2 months and mean weight of 220 ± 20 g. In order to determine the pre-test variables, 15 rats were killed and blood samples were taken from their hearts. Then, the rest of the rats were randomly divided into two groups of control (n=15) and training (n=15). The training group did the exercises 5 days a week for 8 weeks on Rodentschr ('39') treadmill. **Results:** There were significant differences in plasma levels of visfatin and IL-6 in training and control groups ($P=0.000$). This significant difference was found in the training group rather than the control or pre-test groups ($P=0.000$). Furthermore, no significant difference was observed in TNF- α changes between the groups ($P<0.05$). **Conclusion:** Exercise has the potential to decrease visfatin plasma levels and bring about changes in the expression of inflammatory cytokines. Therefore, it can be stated that the training program may prevent and improve inflammatory diseases, obesity, diabetes and insulin resistance.

کلمات کلیدی:

Keywords: Aerobic exercise, Interleukin-6, Necrosis factor of alpha tumor, Visfati

