

عنوان مقاله:

A Comparative Study on the Effect of Endurance and Resistance Training on Angiogenesis Factors in Elderly Diabetic Patients

محل انتشار:

مجله دانشگاه علوم پزشکی کرمان، دوره 23، شماره 3 (سال: 1395)

تعداد صفحات اصل مقاله: 10

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خلاصه مقاله:

**Background & Aims:** The main long-term problems of chronic diabetes are cardiovascular complications classified as micro/macro-vascular complications. The consequences for patients include cardiovascular diseases, nephropathy, retinopathy, and so on. Due to the effect of exercise on tissue blood flow distribution and the different nature of the two types of resistance and aerobic exercises, this study aimed to compare the effect of aerobic and resistance trainings on angiostatin level of men with type 2 diabetes. **Methods:** A total of 26 men with type 2 diabetes (mean age:  $64.56 \pm 11.3$  years, mean weight:  $68.50 \pm 5.42$  kg, mean height:  $150 \pm 43.162$  cm and 10-year history of diabetes) referred to Kerman Diabetes Center were purposefully selected and randomly divided into two groups of aerobic and resistance trainings. After being familiarized with the research protocol, subjects did resistance exercises based on a percentage of the maximal strength ( $1$  RM) and the endurance exercise with the intensity of percentage of maximum consumed oxygen three sessions in week ( $40-60$  minutes each session) and for 12 weeks. Blood samples before and 24 hours after the last training session were collected. For comparison within the groups, independent t-test and for comparison between groups, repeated measure two-way ANOVA were used. **Results:** Serum angiostatin level and VEGFR showed no significant difference between the two groups ( $P=0.116$ ,  $P=0.218$  respectively), but groups showed significant increase in serum angiostatin level and VEGFR after the intervention ( $P<0.05$ ). **Conclusion:** The results showed that twelve weeks of resistance and aerobic exercises can improve of men with type 2 diabetes and increases their angiostatin level but non significantly.

کلمات کلیدی:

Angiostatin, Type 2 diabetes, Angiogenesis, resistance training, aerobic training

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