



Comparing the effects of two different type of exercise training combined with calorie restriction on insulin resistance indicator in obese women

Poster Presentation

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Abstract

Introduction: Doing a variety of exercises daily and regularly can prevent and treat many metabolic diseases associated with insulin resistance and obesity. This study aimed to compare the effects of six weeks of high-intensity interval training (HIIT) and moderate-intensity continuous training (MICT) combined with Calorie restriction (CR) on insulin resistance in obese women in Tabriz city.

Methods: This study measured the effect of six weeks of MICT and HIIT with CR on insulin resistance index in overweight women in Tabriz. Thirty-six overweight women in the age range of 45 to 55 years were replaced in four groups, including moderate-intensity continuous training + caloric restriction (10%), high-intensity interval training + caloric restriction (10%), caloric restriction (20%), and control group. All moderate-intensity continuous training (60-75% of MHR) and high-intensity interval training (75-85% MHR) were performed in three sessions per week. In the calorie restriction group, the subjects had a 20% limit on daily energy intake. Note that in each session, the maximum time to complete the training session was increased by 10% of the daily energy expenditure of the subjects.

Results: In both exercise groups with calorie restriction and calorie restriction groups without exercise, insulin resistance index decreased ($p < 0.5$) but no significant difference was observed between the training groups and the calorie restriction group ($p > 0.5$). In both training groups with calorie restriction, daily caloric intake decreased by 10%, and on the other hand, these groups had a 10% increase in their daily energy expenditure, and in the calorie restriction group, there was a 20% reduction in energy intake.

Conclusion: In general, reducing daily energy intake and increasing daily energy expenditure through both HIIT and MICT reduces the rate of insulin resistance index in Tabriz city's obese women.

Keywords

Exercise Training; Calorie Restriction; Insulin Resistance; Obesity

Reference:

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