

عنوان مقاله:

The Effect of Aerobic Exercise and Consumption of Eryngium Billardieri Extract On Women with Obesity and Type ۲ Diabetes

محل انتشار:

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خلاصه مقاله:

Introduction: This study aimed to evaluate the effect of aerobic exercise and eryngium billardieri extract consumption on insulin resistance and lipid profile in obese women with type ۲ diabetes. Methods: This quasi-experimental research used control group in pre- and post-tests. The subjects were ۳۸ obese women with type ۲ diabetes (Mean age 51.56 ± 5.21 years old and BMI 31.88 ± 2.57 kg/m²), who were randomly divided into four groups: control (C=۹), Drug (Drug=۱۰), Exercise (EX=۹), and Exercise and drug (EX&Drug=۱۰). The aerobic exercise protocol consisted of three exercise sessions per week for eight weeks. The Drug and Exercise and drug groups consumed ۲۰۰ml of eryngium billardieri extract every day. Blood samples were collected ۲۴h before and ۴۸h after the last exercise to measure blood glucose, insulin, and lipid profile, including cholesterol, triglyceride, HDL, LDL, and VLDL. Statistical methods include the Kolmogorov-Smirnov, Levene, covariance (ANCOVA), and Bonferroni test. Results: A significant decrease was observed in plasma glucose, insulin, insulin resistance index, cholesterol, triglyceride, LDL, and VLDL. There was a significant increase in HDL after aerobic exercise and consumption of eryngium extract in type ۲ diabetes in Drug groups compared to the control group. Conclusions: Based on the results, the effect of exercise and consumption of eryngium extract increased insulin sensitivity by improving insulin and GLUT4 function. In addition, lipid profile improvement was the positive effect of aerobic activity and consumption of eryngium extract by increasing the lipase enzyme activity and thus increasing the removal of adipose tissue.

کلمات کلیدی:

aerobic exercise, Eryngium billardieri extract, insulin resistance, lipid profile

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