

عنوان مقاله:

Effect of Exercise With and Without Pomegranate Concentrate Consumption on HbA1c and C-Peptide Levels: A Study of Middle-aged Women with Metabolic Syndrome

محل انتشار:

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خلاصه مقاله:

Introduction: Metabolic syndrome is defined as a cluster of metabolic disorders, which may lead to type II diabetes and cardiovascular diseases. Promotion of healthy lifestyle and use of herbal supplements with anthocyanin and phenols are recommended for the treatment of metabolic syndrome. The present study aimed to investigate the effects of eight weeks of combined aerobic and resistance exercises and pomegranate concentrate consumption on the levels of HbA1c and C-peptide in women with metabolic syndrome. **Methods:** This study was conducted on 30 middle-aged women with metabolic syndrome, who were randomly assigned to two groups of exercise (E; n=15) and exercise with pomegranate concentrate (EPC; n=15). The exercise protocol was conducted at 60-80% intensity of the maximal heart rate and 60-80% of one-repetition maximum. Data analysis was performed in SPSS version 20 at the significance level of $P \leq 0.05$. **Results:** HbA1C levels significantly reduced in the EPC group ($P < 0.05$), while no significant difference was observed between the groups in terms of the C-peptide and HbA1C levels ($P > 0.05$). In addition, the within-group comparison indicated no significant changes in the C-peptide levels in the E and EPC groups ($P > 0.05$). **Conclusion:** According to the results, regular physical exercises along with the consumption of pomegranate concentrate could be effective in reducing HbA1c. Improving a number of metabolic syndrome indices (e.g., insulin resistance) could prevent the complications of metabolic syndrome in middle-aged women

کلمات کلیدی:

Combined exercises, metabolic syndrome, Pomegranate concentrate, HbA1c, C-Peptide

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