

Original Paper

## Effect of eight weeks aerobic exercise on plasma level of agouti-related protein, glycated hemoglobin and glucose in non-active type II diabetic women

Ghiasi E (M.Sc)<sup>1</sup>, Dabbagh Manesh MH (M.D)<sup>2</sup>  
Daryanoosh F (Ph.D)\*<sup>3</sup>, Nazemzadeghan Gh (Ph.D)<sup>4</sup>

<sup>1</sup>M.Sc in Exercise Physiology, Shiraz University, Shiraz, Iran. <sup>2</sup>Professor, Medical Science of Endocrinology and Metabolism, Faculty of Medicine, Shiraz University of Medical Sciences, Shiraz, Iran. <sup>3</sup>Associate Professor, Department of Exercise Physiology, Shiraz University, Shiraz, Iran. <sup>4</sup>Assistant Professor, Department of Exercise Physiology, Shiraz University, Shiraz, Iran.

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### Abstract

**Background and Objective:** Diabetes mellitus is the most common type of metabolic diseases which is characterized with hyperglycemia due to implicit or relative insulin deficiency. Diabetes mellitus is acutely related to obesity. Agouti-related protein (AGRP) has 132 amino acids and increases appetite in humans. This study was done to determine the effect of eight weeks aerobic exercise on plasma level of agouti-related protein, glycated hemoglobin and glucose in non-active type II diabetic women.

**Methods:** In this quasi-experimental study, 30 female diabetic patients were divided into exercise and control groups. The training program was performed 3 sessions a week in course of 8 weeks, each session was last for 60 minutes, and the controls did not have any exercise. The plasma level of agouti-related protein, glycated hemoglobin and glucose were measured.

**Results:** There was no significant alteration in the level of AGRP, HbA1c and glucose in either exercise or control groups. There was no significant relation between AGRP with glucose, AGRP with HbA1c and HbA1c with glucose in the exercise and control groups.

**Conclusion:** Eight weeks of aerobic exercise is not enough for making any changes on plasma level of AGRP, HbA1c and glucose in non-active type II diabetic women.

**Keywords:** Diabetes mellitus, Aerobic exercise, Agouti-related protein, Glycated hemoglobin, Glucose

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\* Corresponding Author: Daryanoosh F (Ph.D), E-mail: daryanoosh@shirazu.ac.ir

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