

عنوان مقاله:

The Effect of ۱۲ Weeks Aerobic Training on the MafA Gene Expression of Pancreas in the Male Wistar Rats Type ۲ Diabetes

محل انتشار:

مجله دیابت و چاقی ایران، دوره 10، شماره 2 (سال: 1397)

تعداد صفحات اصل مقاله: 7

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خلاصه مقاله:

Objective: MafA is one of the major factors in the family of MafA transcription factors. In pancreatic beta cells, MafA plays an important role in regulating the expression of glucose-dependent Insulin gene. On the other hand, Lipotocyticleads to negative expression of MafA expression when exposed to inflammatory cytokines. These statements in general emphasize the role that MafA plays as a key regulator of genes that are effective in maintaining the function of beta cells and glucose-dependent insulin synthesis. Materials and Methods: Considering the very important role of MafA transcription factor in the protection and function of beta cells and insulin secretion, In order to investigate the effect of exercise activities on expression of this gene, ۱۶ male Wistar rats were divided into diabetic control and diabetic training groups. The two groups were diabetic with receiving nicotinamide and streptozotocin injection and the experimental group was trained for ۱۲ weeks by aerobic exercise on a treadmill. Results: The results of the study showed a significant increase in the expression of the MafA gene after ۱۲ weeks of aerobic training, which resulted in a significant decrease in blood glucose concentration and increased beta cell function. Conclusion: Based on the evidence of the mechanisms responsible for the synthesis and secretion of insulin in the pancreatic beta cells, it can be concluded that increased levels of insulin levels in aerobic intervention group rats in the present study it is rooted in increasing the expression of MafA compared to the control group.

کلمات کلیدی:

Gene expression, Pancreatic beta Cells, Diabetes mellitus type ۲, Aerobic exercise

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