Nutritional and Metabolic Diseases and Conditions; New Type 2 Diabetes Study Findings Recently Were Reported by Researchers at Shaheed Beheshti University of Medical Sciences (Does endurance training affect IGF-1/IGFBP-3 and insulin sensitivity in patients with type 2 diabetes?)

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ABSTRACT

The news correspondents obtained a quote from the research from the Shaheed Beheshti University of Medical Sciences, "The training protocol consisted of a 45-minutes cycling session/day, three days/week for six weeks with intensity 60-70% of the maximum heart rate. To examine the IGF-1 and the IGFBP-3, fasting blood glucose levels, and insulin resistance, blood sampling was performed before and immediately after the first and 18th sessions. The homeostatic model assessment (HOMA-IR) method was used to determine insulin resistance. Before the study began, no significant difference between the two groups was observed in the anthropometric and blood factors. After a session of aerobic exercise, IGF-1 and IGFBP-3 levels were significantly increased (153.79% and 64.3%, respectively), and fasting glucose and insulin resistance levels were significantly decreased (15.82% and 27.82%, respectively); however, the changes resulting from a six-week training period were not significant.

FULL TEXT

2016 FEB 1 (NewsRx) -- By a News Reporter-Staff News Editor at Diabetes Week -- New research on Nutritional and Metabolic Diseases and Conditions is the subject of a report. According to news reporting from Tehran, Iran, by NewsRx journalists, research stated, "The aim of the present study was to determine whether six weeks of submaximal endurance training using a cycle ergometer would result in a modified serum insulin-like growth factor-1 (IGF-1), an insulin-like growth factor binding protein 3 (IGFBP-3), and insulin resistance in middle-aged men with type 2 diabetes (T2D). Twenty male patients with T2D voluntarily participated in this study and were randomly divided into two groups: the training group (N.=10) and the control group (N.=10)."

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According to the present study, one session of aerobic exercise for middle-aged men with T2D leads to increased IGF-1 and IGFBP-3, and to decreased fasting glucose and insulin resistance. Considering the lack of changes after a six-week training, it seems that the amount of change depends on subjects' fitness level and exercise parameters."

According to the news reporters, the research concluded: "From a clinical point of view, the beneficial effects of acute exercise inT2D subjects show that such exercises should be part of the daily program for them."

For more information on this research see: Does endurance training affect IGF-1/IGFBP-3 and insulin sensitivity in patients with type 2 diabetes? Journal of Sports Medicine and Physical Fitness, 2015;55(9):1004-1012. Journal of Sports Medicine and Physical Fitness can be contacted at: Edizioni Minerva Medica, Corso Bramante 83-85 Int Journals Dept., 10126 Turin, Italy.

Our news journalists report that additional information may be obtained by contacting M.R.M. Tehrani, Shahid Beheshti Univ Med Sci, Res Inst Endocrine Sci, Cellular &Mol Endocrine Res Center, Tehran, Iran. Additional authors for this research include M. Tajvidi, S. Kahrizi and M. Hedayati.

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DETAILS

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