

Physical Exercises for Patients with Diabetes: Treatment or Decrease of Risk Factors?

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The hypothesis raised in the paper above is based on the concept that different frequencies of physical exercises reduce body composition and glucose profile of patients with diabetes in different ways. Apparently, the initial characteristics of patients (Table 1) do not match the inclusion criteria for the body mass index (BMI), as well as fasting glucose level, systolic and diastolic blood pressure. On the other hand, scientifically relevant studies on diabetes^{1,2} strictly followed the inclusion and exclusion criteria previously established. This way, it is possible that the authors have found reduced adiposity indicators and glucose parameters, once patients presented very high values at baseline. Literature shows, as opposed to what authors say, that the more the metabolic parameters of patients in the beginning of the study, greater are the improvements resulting from the intervention, either in terms of lifestyle or therapy³.

Key words

Exercise, type 2 diabetes mellitus, blood glucose, body composition

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For body fat measurements, the authors wrongly refer to a book chapter, but the original reference differs according to the gender: for men⁴ and women⁵. Surprisingly, the authors refer to Pollock & Wilmore⁶ to classify the BMI. Nevertheless, literature is unanimous in interpreting the BMI according to the criteria set out by the World Health Organization⁷ (1998).

The authors report that the group that worked out five times in a week had their BMI reduced only in the last week of the study, as compared to baseline values. The authors believe that this "delay" may be explained by an unconscious increase of intake, for the purpose of offsetting the increase of physical exercises. Nevertheless, such explanation is extremely speculative and is not based on proper scientific materials. The most logical argumentation focused on the actual purpose of the work would evoking that, even if BMI alterations had not been observed in the first weeks, possibly not all individuals managed to reach the goal of practicing at a target heart rate of 70%, since, apparently, according to the article, it was not ratified by the authors.

The authors also describe in the methodology that the abdominal circumference was measured in the abdominal region, in its smallest perimeter. However, the I Brazilian Guideline on Metabolic Syndrome, published in 2005⁸ in this scientific journal, states that the abdominal circumference must be measured between the iliac crest and the lower costal arch. In view of these facts, we can observe that the methodology applied in this study is characterized as waist circumference, not abdominal circumference.

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Author's reply

The variables (BMI, fasting glucose level and blood pressure) cited on Table 1 are according to the inclusion criteria defined in the research.

Pimentel et alii cite "very high baseline values"; all baseline values are below the baseline values, according to The Expert Committee on the Diagnosis and Classification of Diabetes Mellitus. Report of the Expert Committee on the Diagnosis and Classification of Diabetes Mellitus. *Diabetes Care*. 2000; 23 (Suppl. 1): S4-19.

As for the waist circumference, several literatures refer to both measurement modes, such as Ferreira, MG; Valente,

JG; Gonçalves-Silva, RMV; Schieri, R. Accuracy of waist circumference and waist-to-hip ratio as predictors of dyslipidemia in a cross-sectional study among blood donors in Cuiabá, Mato Grosso State, Brazil. *Cadernos de Saúde Pública*, vol. 22, n. 2, 2006. And Cabrera, MAS; Wajngarten, M; Gebara, OCE; Diament, J. Relationship between body mass index, waist circumference, and waist-to-hip ratio and mortality in elderly women: a 5-year follow-up study. *Cadernos de Saúde Pública*, vol. 21, n. 3, 2005.

Sincerely,

Prof. Dr. Denise Maria Martins Vancea.