

Physical activity in type 1 diabetic young and early adults treated with insulin pump therapy. A preliminary report.

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ABSTRACT

Purpose: To determine the level of physical activity in young and early adults with type 1 diabetes in comparison with their healthy counterparts and to determine whether the use of insulin pump facilitates physical activity.

Materials and methods: This study included 40 type 1 diabetes (T1D) subjects of both sexes treated with a personal insulin pump therapy, and 30 healthy controls. The diagnostic survey included questions about nutrition, knowledge about the disease and whether the patient can control diabetes through physical activity, diet and self-monitoring. The International Physical Activity Questionnaire – long form (IPAQ-L), was used to assess the level of physical activity of both diabetic and control individuals.

Results: 87.5% T1D subjects believe that using an insulin pump facilitates their physical activity. The

level of physical activity associated with cycling ($p=0.038$) and vigorous physical activity ($p=0.008$) was higher in T1D than in the control group. Statistically significant differences ($p=0.043$) were found for total physical activity. The total mean activity was higher in participants with T1D (8147.70 MET-min/week) compared to the control group (5857.55 MET-min/week).

Conclusions: Young and early adults with type 1 diabetes may be more physically active than their healthy counterparts, mainly in their leisure time. The use of a personal insulin pump facilitates physical activity, but most diabetics experience episodes of hypoglycemia after physical activity.

Key words: Type 1 diabetes, insulin pump, physical activity, young adults, early adults, IPAQ

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