

Comparison of two walking strategies to promote physical activity in sedentary adults

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Abstract

Introduction: Sedentary lifestyle is the fourth risk factor worldwide. Performing 10,000 daily steps or 30 minutes of moderate to vigorous physical activity has been recommended by WHO to promote physical activity in the general population and as well as in chronic respiratory diseases.

Objective: To compare the metabolic expenditure, time of moderate to vigorous physical activity (MVPA), and the number of steps generated between two recommendations: 1) Perform 10,000 daily steps, 2) Three fast daily walks of 10 minutes each.

Method: Sedentary youth between 18-30 years. Accelerometers ActiGraph wGT3X-BT was used to measure metabolic expenditure. Baseline evaluation (b) was performed for five days. Intervention measurements were randomized to avoid the learning effect. The normality test was performed with Shapiro-Wilks and a comparison of medians with the Wilcoxon test.

Result: 15 subjects (10 women), age 23 (21-26) years, BMI 25.8 (22.6-29.7) participated. When comparing recommendation 1 vs. 2, there were significant differences in total calories (1863 (1108-2313) and 1699 (1012-2016) kcals; p 0.009), METs (1.13 (1.08 - 1.2) and 1.11 (1.09-1.17); p 0.018), Total MVPA time (255.16 (147.33 - 332.33) and 202 (134.18-253.5) min; p 0.005), and total steps (40762 (23907-48696) and 30545 (19966 - 88716) steps; p 0.015). The rest of the variables did not show significant differences.

Conclusion: Our results suggest that sedentary adults who perform 10,000 daily steps have higher metabolic expenditure, time in MVPA and a number of steps than adults that perform three daily walks of 10 minutes each.

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