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ENERGETIC EXPENDITURE AND SUBSTRATE PREDOMINANTLY USED BY SEDENTARY YOUNG IN THE VIRTUAL REALITY GAMING

Thaíse S. Costa* (1), Vananélia P. N. Geraldo (2), Luciana Kawakami-Jamami (1)
(1) Centro Universitário Central Paulista (Unicep), São Carlos, SP, Brasil
(2) Instituto de Física de São Carlos, USP, São Carlos, SP, Brasil

Abstract
The aim of this study was evaluate energetic expenditure based on the substrate consumed by young volunteers to perform proposed activity with video game (virtual reality gaming). Each vonlunteer was informed about the procedures of the study. They were submmitted to anamnesis, physical examination and the anthropometric data were collected. Twenty two sedentary young between 18 and 30 years old were evaluated of which two were excluded due low energetic expenditure during activity when compared to the predicted value. In this study, calibrated ergoespirometry VO2000® with face mask was used to find energetic expenditure. Polar heart rate monitor was utilized for heart rate measurements during rest (30 minutes), and Xbox 360® Kinect game was employed for activities (20 minutes). Based on energetic substrate predominantly used by each volunteer, we named Group I (higher consumption of carbohydrates) and Group II (higher utilization of lipids). Most volunteers (n=17) preferentially used carbohydrates; only three volunteers predominantly spent lipids. Group I utilized more calories than Group II. Results showed that carbohydrates were the energetic substrate more used for proposed activity with video game which is probably related to the activity time/game.

Key words: *energetic expenditure, virtual reality gaming, ergoespirometry*
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Introduction

Evaluate and compare the energy expenditure from the substrate more used by each volunteer to perform the proposed activity, with virtual reality (video game) using ergospirometer VO2000®.

Results and Discussion

A total of 22 voluntary most (n = 17) showed increased use of carbohydrates consumed only three voluntary predominantly lipids form. In group 1 consumed a greater amount of calories compared to group 2 (Figure 1.0

Conclusions

Based on the results, the more energy substrate used for the proposed activity with the video game, was carbohydrate, probably related to the uptime / game.

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