

Abstract

Title: Basal metabolism and nutritional intervention for people with spinal cord injuries

Objectives: The main objective of this work was empirical research of case evaluation studies ($n = 3$), where we analyzed: the relationship between energy expenditure (basal metabolism) and energy intake for people diagnosed with spinal cord injury (SCI). The secondary objective was to determine whether the changes in macronutrient distribution and daily energy intake would result in a decrease in body weight and body fat for individual probands. The pilot study in our work was focused on the overview of variable basal metabolism (BM) values for people with SCI.

Methods: In our work, we used the method of indirect calorimetry to measure BM and together with the value of working metabolism we determined in the nutritional intervention (n. i.) the ideal energy intake for our probands. We observed primarily measurable changes in the amount of fat and muscle tissue.

Results: We have found that, in keeping with the prescribed n. i. rules, all probands achieved to reduce their body weight. The average body weight loss for probands was 0.29 ± 0.02 kg per week. BM values in our pilot study were 15 to 61% lower for our probands ($n = 15$) and did not correlate with the height of SCI.

Key words: spinal cord injury (SCI), basal metabolic (BM), nutrition intervention (n. i.), energy expenditure, energy intake