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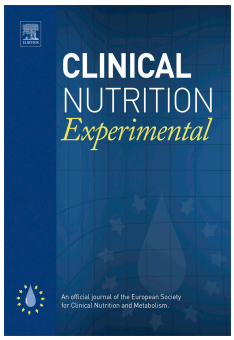

Body weight control and energy expenditure

Danielle Cristina Fonseca, RD, Priscila Sala, PhD, Beatriz de Azevedo Muner Ferreira, RD, Jessica Reis, RD, Raquel Susana Torrinhas, PhD, Itai Bendavid, Dan Linetzky Waitzberg, PhD

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Authors: Danielle Cristina Fonseca (RD), Priscila Sala (PhD), Beatriz de Azevedo Muner Ferreira (RD), Jessica Reis (RD) Raquel Susana Torrinhas (PhD), Itai Bendavid, Dan Linetzky Waitzberg (PhD)

Author's affiliations / e-mail addresses: Danielle C. Fonseca (daniellecf_25@hotmail.com), Priscila Sala (sala.priscila@gmail.com), Beatriz de Azevedo Muner Ferreira (beatriz_azfe@hotmail.com), Jessica Reis (jeeh.reis@hotmail.com) Raquel S. Torrinhas (torrinhas@uol.com.br) and Dan L. Waitzberg (dan@ganep.com.br) are affiliated to the FMUSP – University of São Paulo, School of Medicine, Department of Gastroenterology, Digestive Surgery Discipline (LIM 35), São Paulo, Brazil; Itai Bendavid (itbd@walla.com) is affiliated to the Sackler School of Medicine, Tel Aviv University, Israel and the department of General Intensive Care and Institute for Nutrition Research, Rabin Medical Center, Beilinson Hospital, Petah Tikva, Israel.

Corresponding author: Danielle C. Fonseca - Av. Dr. Arnaldo, 455, 2° andar, sala 2208 – Cerqueira César - CEP: 01246-903, São Paulo – SP, Brazil - Phone/ Fax: +55 11 3061-7459. E-mail: daniellecf_25@hotmail.com

ABSTRACT

Body composition has great importance in the value of energy expenditure. Reduced energy expenditure plays an important role in the development of obesity by decreasing resting energy expenditure, energy activity, diet-induced thermogenesis, or a combination of all of these components. It thus contributes to positive energy balance and subsequent weight gain. Obesity, therefore, can be considered, among other aspects, the consequence of an energy imbalance; that is, energy intake greater than that spent in a certain period. In order to have stability of body weight and body composition it would be necessary for energy intake to correspond to energy expenditure. Regarding the comparison of energy expenditure between non-obese and obese individuals, the results point to a differentiated behavior of obese individuals. However, it has not yet been possible to identify which specific energy expenditure component contributes most to this differentiated behavior can (resting energy expenditure, energy expenditure during physical activity or food thermogenesis). Thus, it is important to standardize the techniques for the evaluation of these parameters in order to improve the reproducibility of the results.

Key words: energy expenditure; weight control; obesity; body composition, diet-induced thermogenesis