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The excessive caloric intake and micronutrient deficiencies related to obesity after a long-term interdisciplinary therapy

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Abstract

OBJECTIVE: To assess the effectiveness of a long-term interdisciplinary lifestyle modification therapy on food intake, body composition and anthropometric measurements of obese women.

RESEARCH METHODS & PROCEDURES: Seventy obese women (age 41 ± 5.9 years) attended the interdisciplinary therapy, with nutrition, physical exercise, physiotherapy and psychological support during the course of one year. Usual food intake was estimated by three-day dietary record. The dual-energy x-ray absorptiometry was performed to determine body fat and fat-free mass. Waist and hip circumferences were also measured. The *t*-Student and Wilcoxon tests were used for comparisons among categories, $p < 0.05$ was considered to be significant.

RESULTS: The assessment of dietary intake has shown significant changes after interdisciplinary therapy. It was observed a reduced intake of total calorie (18.3%), carbohydrate (15.6%) and total fat (13.1%). Total micronutrients intake did not change positively after therapy, as the intake of sixteen micronutrients was still lower than recommended. The therapy was effective in reducing significantly body weight (5.9%), BMI (6.1%), body fat (4.7%), waist (5.2%) and hip (3.8%) circumferences.

CONCLUSIONS: Long-term interdisciplinary therapy was effective to decrease caloric, carbohydrate and fat intake. The therapy changed positively the body composition and reduced anthropometric measurements. However, the intake of some micronutrients after the therapy was still significantly lower than recommended. This way, we understand that the proposed interdisciplinary methodology can be effective to treat obesity, but it is reinforced the need to address the micronutrient deficiency in the target population.

Keywords: public health, nutrition, lifestyle modification, dietary change, obesity treatment