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Low intake of calcium and abdominal obesity in Brazilian adults

Ana Gabriella P Alves, Beatriz A Carvalho and Maria S Silva
Federal University of Goiás, Brazil

Statement of the problem: Obesity, especially abdominal, is one of the major public health problems in the world. In this regard, studies have observed protective effects of some nutrients on obesity, including calcium, due to its supposed action in the regulation of lipid metabolism in adipocytes. The aim of this study was to evaluate the association between calcium intake and abdominal obesity in Brazilian adults.

Methodology: this cross sectional study was developed in March 2016 with 31 subjects from Santo Antônio de Goiás, Central-West region of Brazil. The waist circumference (WC) was measured with anthropometric inextensible tape (Sanny®, São Paulo, Brazil) at the midpoint between the lowest rib and the iliac crest. Women with WC \geq 80cm and men with WC \geq 94cm were classified with increased WC. To obtain average calcium intake, three 24-hour dietary recalls were collected on non-consecutive days, including one day of the weekend. Student's t-test for independent samples was used to evaluate the difference in calcium intake between adults with adequate and increased WC. Binary logistic regression was used to analyze the association between WC and calcium intake. P values $<$ 0.05 were considered significant. This research was approved by the Research Ethics Committee of Federal University of Goiás, Brazil. Findings: Of the 31 participants, 96.8% were female and the mean age was 41.39 (\pm 11,36) years. There was a higher calcium intake among subjects with adequate WC ($p = 0.002$). In addition, the lower is the calcium intake, higher is the chance of having increased WC ($p = 0.022$).

Conclusion: Considering the association between calcium intake and waist circumference, the consumption of foods rich in this mineral needs to be encouraged, which may contribute to reduce public health problems like obesity and associated morbidities.

Biography

Ana Gabriella Pereira Alves is a Nutritionist graduated from the Federal University of Goiás, Brazil. C er's degree in Health Sciences (Faculty of Medicine/Federal University of Goiás, Brazil) and is currently a PhD student in the same program. She concluded a postgraduate in Sports Nutrition and is a postgraduate student in Functional Clinical Nutrition, co-author of two book chapters, related to Sports Nutrition, and is Anthropometrist ISAK Level 1. She is also a Member of the Laboratory of Physiology, Nutrition and Health (Faculty of Physical Education and Dance/Federal University of Goiás, Brazil).

anagabriela_alves@hotmail.com

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