Consumption of maize food group and its contribution on the diet of rural women in México

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Abstract

Native maize is the main cereal in the diet in rural communities in México, especially in those with a traditional maize-based food-pattern. Although maize has a high nutritional value, its consumption in rural communities has declined in recent decades. Traditional food replacement by modern and processed foods seems to adversely affect the composition of the diet. The aims of this study were: to evaluate the consumption of maize, its influence on nutrient intake in Matlatzincas women, and to analyze the association between the intake of maize food products with specific nutrients within the context of the most current dietary pattern in this indigenous group from central México. In this longitudinal study, we assessed diet over a one-year period, using eight 24-h dietary recalls and a food frequency questionnaire in a rural representative sample of 92 indigenous women aged 19 to 90 years. We derived dietary patterns using principal component analysis based on the intake of ten predefined food groups according to the Mexican equivalents food system. A specific food group based on maize products (maize-food-group) such as *tortilla, sopes, pozole, atole*, *pinole, tacos*, etc., was created to identify separately maize consumption in the habitual diet. The percentage of daily energy intake attributed to maize-food-group as well as the intake of macro and micronutrients were estimated. Based on the nutrimental composition of each food group, we analyzed habitual intakes of energy (kcal/d), carbohydrates, proteins, lipids, fiber, vitamins A, D, C and B12 (mg/d), and micronutrients: phosphorus, calcium, iron and zinc (mg/d). Analysis of variance and Pearsońs correlation test were used to evaluate the association between the tertiles of the consumption of maize-food-group and nutrient intake. Additionally, a diet score was calculated to assess diet quality according to maize-food-group consumption. All dietary data were energy-adjusted for the analysis. The consumption of maize-based-foods corresponded to 23.0% of the total caloric intake. Consumption of maize was higher among older women. Consumption of maize-food-group was positively correlated with the ingest of proteins, lipids, dietary fiber, calcium, phosphorus, iron, B12 vitamin, D vitamin and energy (p < 0.05). Better diet quality was associated with a high consumption of maize-food-group. We conclude that the high consumption of maize food products and its positive correlation with the intake of recommended nutrients for healthy diet in adult women, needs interventions in public health to promote a better diet-quality aimed to increase the intake of maize-based food group.

Conflict of Interest
There is no conflict of interest.

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