



ORIGINAL ARTICLE

Food consumption of children younger than 6 years according to the degree of food processing[☆]

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KEYWORDS

Foods;
Nutrition;
Child, preschool;
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Abstract

Objective: To evaluate food intake according to the degree of processing, stratified by family income and age, in a representative sample of children younger than 6 years in the city of Pelotas, RS, Brazil.

Methods: Cross-sectional population-based study carried out with 770 children aged 0–72 months of age living in the urban area of Pelotas. The dietary intake of children was assessed by 24-h recall administered to mothers or guardians. The energy intake was estimated and each food item was classified according to the food processing degree. Food consumption was stratified by age (younger than 24 months; 24 months or older) and associations between quintiles of family income and relative contribution of each food to total energy were performed by linear regression. The Wald test was applied to test linear trend across groups.

Results: The mean energy intake was 1725.7 kcal/day. The mean contribution of processed and ultraprocessed foods was 19.7% among children younger than 24 months and 37% in those aged 24 months or older, while the mean consumption of natural and minimally processed food was 61% and 44%, respectively. Among children aged 24 months or older, a greater consumption of canned foods, cheese and sweets was observed as family income quintiles increased, while breads were more consumed by those children belonging to the lower income quintiles.

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PALAVRAS-CHAVE

Alimentos;
 Nutrição;
 Pré-escolares;
 Saúde pública

Conclusion: A high caloric contribution of ultraprocessed foods in detriment to a lower consumption of natural and minimally processed foods was observed in the diet of children younger than 6 years.

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Consumo alimentar de crianças menores de seis anos conforme o grau de processamento

Resumo

Objetivo: Avaliar o consumo alimentar conforme o grau de processamento, segundo a renda e a faixa etária, em uma amostra representativa de crianças menores de seis anos de idade da cidade de Pelotas, RS.

Metodologia: Estudo transversal conduzido com 770 crianças de zero a 72 meses residentes na zona urbana de Pelotas. O consumo alimentar das crianças foi avaliado por recordatório de 24 horas, aplicado às mães ou responsáveis e o consumo calórico dos alimentos foi estimado de acordo com o grau de processamento. O consumo alimentar foi estratificado por faixa etária (menos de 24 meses; 24 meses ou mais) e as associações entre renda familiar e a participação relativa dos alimentos no total de calorias diárias foram conduzidas por regressão linear simples. Realizou-se teste de *Wald* para avaliar tendência linear entre os grupos.

Resultados: A média de consumo foi 1.725,7 Kcal/dia. A participação calórica proveniente do grupo de alimentos ultraprocessados foi de 19,7% nas crianças com menos de 24 meses e 36,1% naquelas com 24 meses ou mais, enquanto que a contribuição do grupo de alimentos *in natura* e minimamente processados foi de 61,2% e 44,1%, respectivamente. Nas crianças com 24 meses ou mais, observou-se maior consumo de doces conforme o aumento da renda familiar, enquanto que os pães foram mais consumidos entre as crianças pertencentes aos menores quintis de renda.

Conclusão: Observou-se elevada participação calórica de alimentos ultraprocessados em detrimento ao menor consumo de alimentos *in natura* e minimamente processados na alimentação de crianças menores de 6 anos.

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Introduction

Interest on food consumption in childhood is increasing, considering that the formation of eating habits occurs in the early years of life.^{1,2} Inappropriate eating habits at an early age can have negative effects in the short- and long-term, affecting the child's physical growth and development^{3,4} and representing a risk for obesity and other complications.⁵⁻⁷

In recent years, the prevalence of overweight and obesity has increased considerably in the Brazilian population, according to data from the Family Budget Survey (Pesquisa de Orçamentos Familiares [POF]) carried out in 2008–2009. The numbers are also of concern regarding children aged 5–9 years, of whom 33.5% are overweight and 14.3% are obese.⁸ The substitution of home-cooked and natural foods for processed foods can be one of the factors responsible for the high prevalence of excess weight observed in childhood, because these are high energy-density foods, high in fat, sugar, and sodium. Factors such as globalization, accelerated pace of life, purchasing power, and women's work outside the home can also contribute to the changes that occurred in the eating habits of Brazilian

families.⁹⁻¹¹ Similarly, the influence of marketing, through advertisements, attractive packaging and labels, stimulates excessive consumption of industrialized goods, especially among children.¹²⁻¹⁴

In 2010, Monteiro et al.¹⁵ proposed a food classification based on the degree and purpose of food processing. This classification has been recently updated and incorporated into the Food Guide for the Brazilian population, in its latest version published in 2015.¹⁶ The first group comprises natural and minimally processed food (e.g., fruits, vegetables, meats, and beans). The second group is characterized by the processed food or food ingredients from the food industry, *i.e.*, substances extracted from foods and used in the preparation and cooking of dishes (e.g., vegetable oil, salt, sugar). The third group consists of food products with the addition of salt or sugar or other culinary use substances to natural food to make them durable and more palatable (e.g., pickled vegetables, fruits conserved in syrup and candied fruit, canned sardines and tuna; cheese). The fourth group consists of ultraprocessed food products such as ready-to-eat or ready-to-heat foods, whose processing is aimed at durability, availability, convenience, and the appeal of being a ready-to-eat food.

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