Implications of the nutrition transition for monitoring national food and nutrition security

Carlos Augusto Monteiro*
Department of Nutrition, School of Public Health,
University of Sao Paulo, São Paulo, Brazil– carlosam@usp.br

Maria Laura da Costa Louzada
Núcleo de Pesquisas Epidemiológicas em Nutrição e Saúde (NUPENS/USP), São Paulo, Brazil –
maria.laura.louzada@gmail.com

Ana Paula Bortoletto Martins
Núcleo de Pesquisas Epidemiológicas em Nutrição e Saúde (NUPENS/USP), São Paulo, Brazil –
anapbmartins@gmail.com

Rates of obesity, diabetes, and other diet-related chronic diseases have increased worldwide with concomitant declines in the prevalence of undernutrition, particularly in low- and middle-income countries. This nutritional transition is paralleled with recent transformations in the globalizing food system, mainly characterized by reductions in the consumption of traditional meals based on natural or minimally processed foods and increases in the acquisition of ultra-processed food and drink products. Ultra-processed products are formulations made by the food industry mostly or entirely from substances extracted from foods or obtained from the further processing of constituents of foods or through chemical synthesis, with little if any whole foods. Compared to the rest of the diet, they have higher energy density, less protein and fiber, and more added sugar. They are also extremely palatable and habit-forming, convenient, usually sold in large portion sizes, and aggressively advertised and marketed. Therefore, they are intrinsically obesogenic foods. However, our ability to monitor dietary patterns and particularly the dietary share of ultra-processed products across the world is limited by the predominance of studies focused on the evaluation of dietary nutrient profiles and by the overlook of the effects of the industrial food processing. In this work, we will present analyses on the consumption of ultra-processed products using a new food classification based on the extent and purpose of industrial processing applied to national dietary surveys, household budget surveys, and statistics of retail sales. The results indicate that the consumption of ultra-processed food and drink products has widely increased worldwide, particularly in low- and middle-income countries, and that the dietary share of these products is an important marker of diet quality and a predictor of the risk of obesity, metabolic syndrome and dyslipidemia. These results may have important implications for the design and implementation of information systems to monitor national food and nutrition security.

Keywords: Food consumption; Surveillance; Obesity; Ultra-processed foods