

## Fact Sheet

# Consumption of ultra-processed food and drink products in Latin America: Trends, impact on obesity, and policy implications

### Key facts

- Ultra-processed food and drink products (UPP) are ready-to-eat or drink formulations based on refined substances with a careful combination of sugar, salt and fat, plus several additives. They include sugary drinks, snacks, and ‘fast foods’.
- WHO and the World Cancer Research Fund conclude that sugary drinks, energy-dense snacks and ‘fast food’ are key drivers of obesity, diabetes, cardiovascular diseases and some cancers.
- A PAHO study showed that from 1999 to 2013, per capita sales of ultra-processed products continuously increased in 12 Latin American countries, displacing traditional diets based on wholesome foods and meals.
- It was also found that the increase in sales of ultra-processed products was associated with an increase in adult body mass index (BMI) at all levels of consumption, after adjusting for covariates ( $R^2=0.79$ ;  $p<0.0001$ ).
- Countries in the Americas are fighting the obesity epidemic with new taxes and stricter regulations on food labeling, promotion and advertising, which PAHO’s Director has welcomed as “important advances that should be stimulated throughout the Region\*”

### Ultra-processed products and their main characteristics

Consumption of freshly prepared meals based on wholesome foods is consistently associated with good health and low risk of disease (1-2). This is due not only to their nutrition quality, but also the conviviality created around meals (2-3). However, the healthy traditional pattern of eating is being displaced by ultra-processed food and drink products, which are rapidly increasing in low and middle-income countries (4). These products are formulations created from substances extracted from foods (including fats, starches, and sugars) (5). They include a vast range of energy-dense snacks, sweetened breakfast cereals, biscuits and cakes, sugary drinks, ‘fast food’, reconstituted animal products, and ready-to-heat packaged dishes.

(\*) [http://www.paho.org/Hq/index.php?option=com\\_content&view=article&id=9871&Itemid=2&lang=en](http://www.paho.org/Hq/index.php?option=com_content&view=article&id=9871&Itemid=2&lang=en)

Compared with wholesome foods, and freshly cooked meals UPPs are higher in sugar, saturated fats and sodium, lower in dietary fiber, minerals and vitamins, and are more energy-dense (4-5). In addition, they are convenient, ubiquitous, heavily marketed, and formulated to be palatable and habit-forming (3).

Since traditional cuisines have evolved as key part of our personal autonomy, identity and culture, the loss of knowledge of food and culinary skills creates serious vulnerability to societies, rural economies and agriculture biodiversity.



## Trends in sales of ultra-processed products in Latin America

The PAHO study estimated trends in consumption of UPPs in Latin America using sales data from the Euromonitor Database (2014). A cross-national time series analysis of 12 Latin American countries from 1999 to 2013 was performed to test the association between changes in per capita annual sales of UPPs (in kilograms) and changes in age-standardized mean BMI in adults. BMI data were obtained from the WHO Global Database and covariates data taken from the World Bank.

Fig 1 shows trends in annual per capita sales of UPPs in the studied countries. In 1999, high annual per capita sales of ultra-processed products were recorded in Mexico (160 kg) and in Chile (120 kg), while sales were up to 4 times lower in Peru (37 kg) and Bolivia (41 kg). By comparison, annual sales of UPPs were 245 kg in Canada and 335 kg in the US. From 1999 to 2013, sales of these products continuously increased in all countries. Large increases were observed in Uruguay (+145%), Peru (+121%) and Bolivia (+151%). During the same period, sales dropped in Canada (-7%) and in the US (-9%).

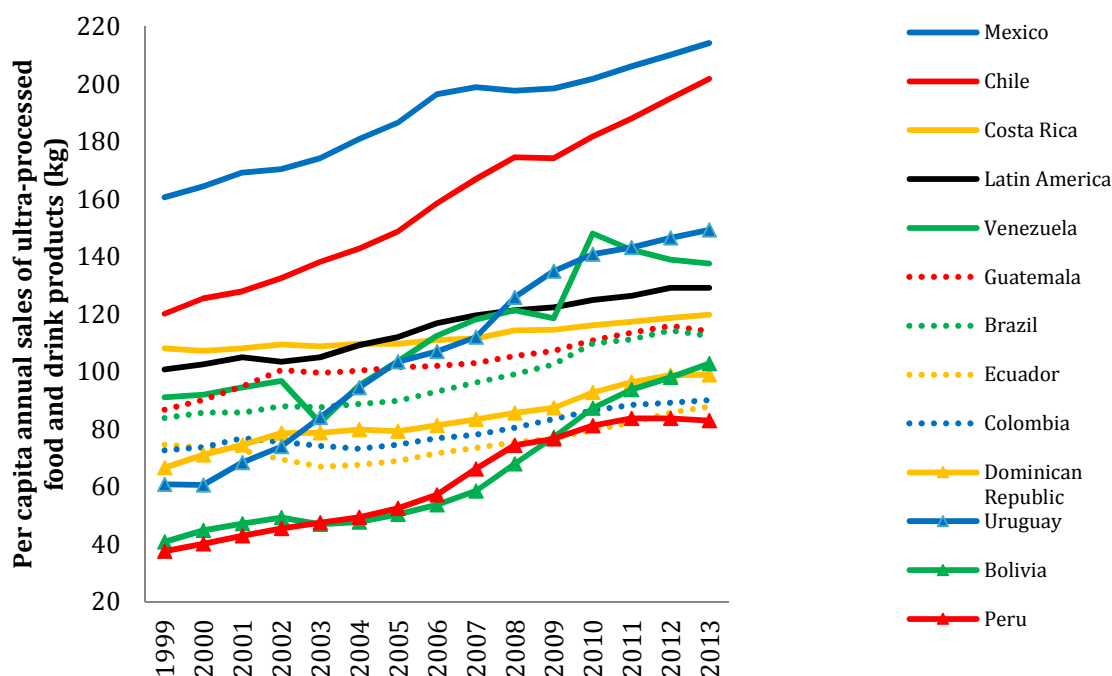
## Ultra-processed products, and overweight and obesity

The World Health Organization (1) and the World Cancer Research Fund (2) state that sugary drinks, energy dense snacks and 'fast food', all of which are ultra-processed, are key drivers of obesity, diabetes, cardiovascular diseases and several cancers. A recent cross national time series study reported fast food sales as an independent predictor of mean body mass index (BMI) in OECD countries (6).

For Latin America, figure 2 shows changes in BMI in adults as a function of sales of ultra-processed products between 1999 and 2009. Countries where sales of ultra-processed products are lower and where traditional diets still prevail, like Bolivia and Peru, have a lower mean BMI, whereas countries where sales of these products are higher, like Mexico and Chile, have greater mean BMI.

After adjusting for covariates (urban population and GDP), changes in sales of ultra-processed products and changes in BMI are significantly associated ( $R^2=0.79$ ;  $p<0.0001$ ). This ecologic association can be summarized in the following metric: Each 1-unit increase in annual sales of UPPs per capita was associated with an increase of 0.008 kg/m<sup>2</sup> in age-standardized BMI (95% confidence interval, CI: 0.003–0.012).

**Figure 1** Trends in annual per capita sales of selected ultra-processed food and drink products<sup>1</sup> (kg) in 12 Latin American countries from 1999-2013



<sup>1</sup>Ultra-processed food and drink products here include carbonated drinks, fruit and vegetable juices, ‘sports’ and ‘energy’ drinks, breakfast cereals, sweet and savory snacks, confectionery, ice creams, biscuits, spreads, sauces and ready meals. Quantity in liters was converted into kilograms. Source: Euromonitor Passport Global Market Information Database (2014) and the World Health Organization Global Burden of Disease.

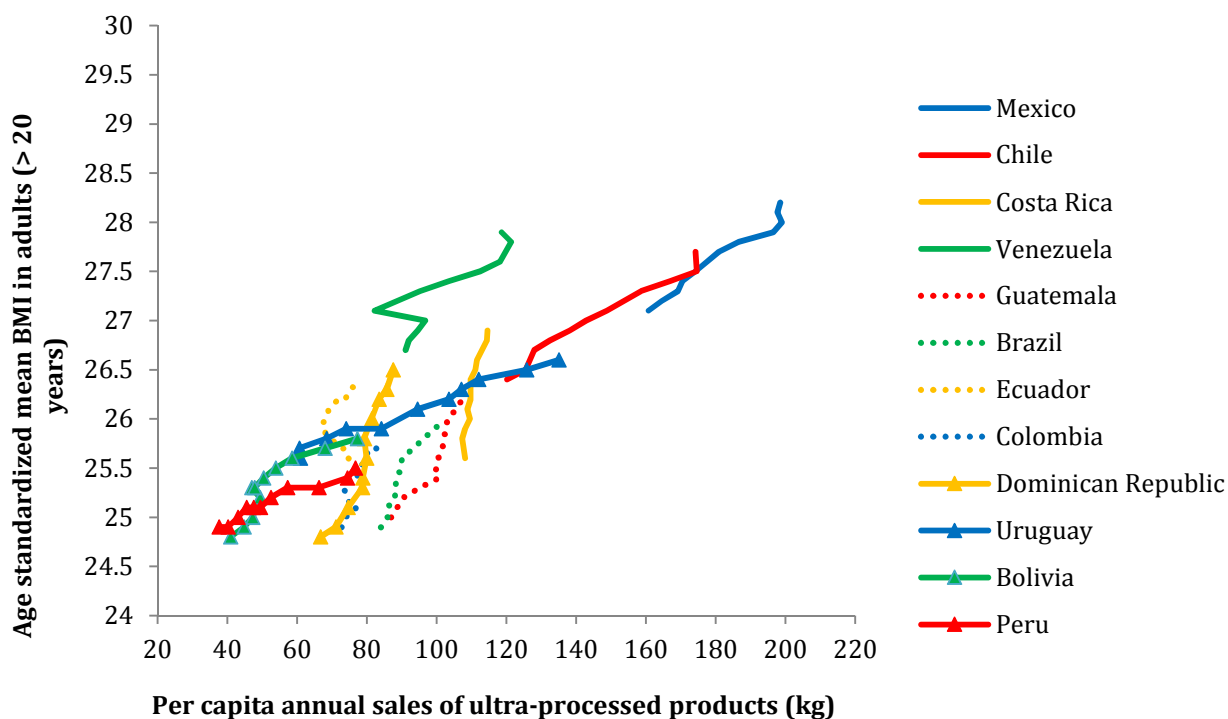
## Policy implications

Current trends in production and consumption of ultra-processed products, and corresponding increases in BMI, are likely to be reversed by statutory regulation and other formal actions of the type that control availability and advertising of tobacco and alcohol products and increase their cost through taxation (5). Regulation of the food industry must cover the labeling, promotion and advertising of UPPs. Such measures are proposed in the Plan of Action for the Prevention of Obesity in Children and Adolescents (7) and need to be initiated, implemented and monitored by governments.

Correspondingly, production and accessibility of wholesome foods need to be increased and improved by adopting specific policies, and regulatory actions designed to make healthy choices the easy choices, backed by education programs. The many actions needed include protection of family farming, increasing the availability of locally produced fresh food in school lunch programs, regulation of marketing of food

to children and enabling the survival and development of food preparation and cooking skills within families. Family meals and traditional cuisine need to be promoted.

**Figure 2** Age-standardized mean BMI in adults as a function of per capita annual sales of ultra-processed food and drink products<sup>2</sup> in 12 Latin American countries, 1999-2009



<sup>2</sup> See footnote in Figure 1

## References

- 1 World Cancer Research Fund/American Institute for Cancer Research (2009) Policy and Action for Cancer Prevention. Food, Nutrition, and Physical Activity: A Global Perspective. Washington, DC: AICR.
- 2 World Health Organization (2003) Diet, Nutrition and the Prevention of Chronic Diseases. Report of a Joint WHO/FAO Expert Consultation. WHO Technical Report Series no.916. Geneva: WHO.
- 3 Pollan M (2014). Cooked: A Natural History of Transformation. Penguin Press: New York.
- 4 Monteiro CA, Moubarac J-C, Cannon G, Ng S, Popkin BM (2014). Ultra-processed products are becoming dominant in the global food system. Obesity Review, Suppl 2:21-8. doi: 10.1111/obr.12107.
- 5 Moodie R, Stuckler D, Monteiro C, Sheron N, Neal B, Thamarangsi T, et al. (2013). Profits and pandemics: prevention of harmful effects of tobacco, alcohol, and ultra-processed food and drink industries. The Lancet, 381(9867):670-679
- 6 De Vogli R, Kouvonen, A & Gimeno D (2014). The influence of market deregulation on fast food consumption and body mass index: a cross-national time series analysis Bull World Health Organ, 92:99-107A
- 7 PAHO (2014). Plan of action for the prevention of obesity in children and adolescents. 53rd directing council 66th session of the regional committee of WHO for the Americas. Washington, D.C., USA.

*This Fact Sheet is based on key results of a research project commissioned by PAHO NMH/Risk Factors Unit to Dr Jean-Claude Moubarac (University of Sao Paulo /Université of Montréal). The collaboration of Prof. Roberto De Vogli (UC Davis) is also appreciated. PAHO Contact information: Dr Enrique Jacoby NMH/Risk Factors Unit, [jacobyen@paho.org](mailto:jacobyen@paho.org)*