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# EDITORIAL

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Globally, childhood overweight and obesity are a major public health concern. During the last decade, the prevalence of overweight and obesity has increased at an alarming rate in many low- and middle-income countries. According to the World Health Organization (WHO), more than 42 million children <5 years of age were overweight by the year 2010. The European and Latin American regions are not the exception in regard to this problem. In the European region, despite actions to reverse the rising trend in childhood obesity, the problem remains. According to WHO, ~1/3 children aged between 6 and 9 years in Europe were overweight or obese in 2010.<sup>1</sup> In Latin America, a recent systematic review estimated that overall between 42.5 and 51.8 million children <18 years of age were overweight or obese between 2008 and 2013, representing 20–25% of children in the region.<sup>2</sup> In Mexico, according to the most recent national nutritional survey, the combined prevalence of overweight and obesity is 9.7% in preschool-aged children\*<sup>‡</sup> or 33.6% when considering as well those at risk of overweight,<sup>§</sup> 34.4% in school-aged children, and 35% in adolescents.<sup>3</sup>

Obese children develop serious medical and psychosocial complications in the short and long term. In the short term, overweight and obesity are independent risk factors for increased morbidity and mortality throughout the life cycle; thus, children with overweight and obesity are at higher risk for developing chronic diseases such as type II diabetes, dyslipidemia, metabolic

syndrome and, less frequently, hypertension.<sup>4,5</sup> On the other hand, although often considered as less serious, psychosocial consequences of childhood obesity are also of great importance. Obese children usually develop a negative self-image and are stereotyped as unhealthy, academically unsuccessful, socially inept, unhygienic, and lazy.<sup>5,6</sup> In the long term, obesity during childhood and adolescence is a predictor of adult obesity. Childhood obesity frequently continues into adulthood and obese children are more likely to develop chronic diseases at a younger age.<sup>7</sup>

Childhood obesity and its rapid increase are the results of a complex interaction of a number of biological, social, environmental and policy context determinants. The basic mechanism of weight change is well known. When energy intake exceeds energy expenditure, positive energy balance occurs, resulting in fat mass accumulation and thus weight gain. This positive energy balance is the result of the interaction of causes at different levels such as food environment determined by food markets, availability and affordability of processed foods (usually high energy-dense foods), an environment that encourages sedentary behavior (lack of spaces for recreational activities or active transportation), poor nutritional literacy, changes in parenting roles (both parents or single parent in the labor force), more exposure to mass media of high energy-dense foods, changes in technology for food production and supply, factors related to work and recreational activities and those related to policies for food production and supply. Understanding the causes (and their relationships) of obesity is crucial so as to determine appropriate actions for its prevention.

Childhood obesity prevention and control require evidence-based policies and regulations aimed at the development of an environment for sustainable actions at the individual, community, and national levels that will result in a healthy diet and promotion of physical activ-

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\* Overweight and obesity defined as z-score of BMI  $\geq +1$  SD z-score and  $\geq +2$  SD in the 2006 WHO recommended Growth Reference, respectively.

<sup>‡</sup> Defined as z-score of BMI  $\geq +2$  SD based on the 2006 WHO Child Growth Standard.

<sup>§</sup> Defined as z-score of BMI  $\geq +1$  SD based on the 2006 WHO Child Growth Standard.

ity. For the former, the actions should aim at addressing the root causes of overweight and obesity. These actions need to include different governmental and private sectors as well as society “at large” and academia with monitoring and evaluation as a key component of any strategy to prevent obesity.

In conclusion, an international effort has been made to tackle the childhood obesity problem. Mexico and Italy have made significant progress on obesity prevention; however, the current astonishing figures of overweight and obesity in both countries indicate that there is still a long way to go, and it is crucial to disseminate abroad the scientific basis, processes, successes, and failures of efforts on the development of strategies to halt the obesity epidemic.

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