

Editorial

Dietary intake and early childhood caries

Ingesta dietética y caries de la primera infancia

Lina María Villegas;¹ Judy Villavicencio;¹ Adolfo Contreras²

¹ Grupo de Odontología Pediátrica y Ortopedia Maxilar, Escuela de Odontología de la Universidad del Valle (Cali, Colombia)

² Grupo de Medicina Periodontal, Escuela de Odontología de la Universidad del Valle (Cali, Colombia)

Early childhood caries (ECC) affect children less than 71 months of age (1) and it represents a public health problem in countries worldwide (2-4). The mean ECC prevalence in United Nations Countries was 23.8% in children younger than 36 months and 57.3% in children aged 36 to 71 months. East Asia and Latin America and the Caribbean were the worst affected by ECC among children aged 36 to 71 months (5). Dental caries pertains to a group of diseases that are estimated “complex” or “multifactorial,” with no single origin pathway (6) and it is resulted by the interaction of bacteria, mainly *Streptococci mutans* (SM) and *Lactobacilli* (LB), and sugary foods on tooth enamel (6,7). There is extensive scientific evidence that frequent sugar intake increases in linear dose-response caries risk(6,7). Additionally, there must be a lack of oral hygiene and lack of use of fluoride (10). This interaction of biological and social factors as biofilm accumulation, virulent microbiota overgrowth, sucrose intake, local reduction in pH environment, decalcification of dental surfaces, reduced salivary buffer capacity and other salivary defensins. In addition, poverty, low educational level, mothers with active caries, reduced dental care and preventing measures, and unfair dental hygiene are important caries determinants(11-13).

Dietary sugar plays a crucial role in tooth decay and it is considered to be the most important risk factor (14,15). Frequent sugar intake increases in linear dose-response caries risk, overweight and obesity (7,16). The association between dental caries and sugar consumption seems to be more evident in subjects aging six months to 12 years old (17,18). Specific dietary guidance for parents of young children, particularly regarding frequency of intake of sugar-sweetened products consumption, could reduce early childhood caries (18,19). Specific dietary guidance for parents of young children, particularly regarding sugar-sweetened beverages consumption, could reduce early childhood caries (19). Therefore, important chronic disease prevention in children and adolescent may imply to reduce diary sugar intake to 10% or less of total energy (11,20). In general, most healthy behaviors are adopted during childhood and adolescence period by imitation of parents and/or legal guardians. Oral hygiene should start even before primary dentition eruption begin, being parents whom perform and supervise the child oral biofilm removal, until adequate regular oral care habits are effectively established (21). The start of toothbrushing is associated with caries experience as revealed in Chinese preschoolers (22). Children who started brushing later in life had higher dmft values than those who brush within the first year of age. A recent study also reveals that few children practiced toothbrushing twice per day, and 34.7% start toothbrushing after the age of 3, absolutely late to control ECC (23).

By 2015 the World Health Organization (WHO) updated guidelines on sugar intake (24) beign confirmed by the Organization for Caries Research (ORCA) and the European Association of Dental Public Health (EADPH) (25) which highlight patterns of sugar consumption, contribution of sugar to dental caries, and fighting against sugar on patient and public health basis. Two systematic reviews showing a clear association between high sugar intake and caries and obesity served as basis for the update of the guideline on sugar intake Moynihan and Kelly (15) and Te Morenga *et al* (26). It is worth mentioning that modern dentistry should be more that promoting dental care to people and should expand its scope integrating fair mouth care practices like regular dental biofilm control with healthy eating, and other healthy behaviors that promote mouth-body and mind wellness (7). A new WHO guideline recom-mends adults and children reduce their daily intake of free sugars to less than 10% of their total energy intake. A further reduction to below 5% or roughly 25 grams (6 teaspoons) per day would provide additional health benefits. Free sugars refer to monosaccharides (such as glucose, fructose) and disaccharides (such as sucrose or table sugar) added to foods and drinks by the manufacturer, cook or consumer, and sugars naturally present in honey, syrups, fruit juices and fruit juice concentrates. The WHO guideline does not refer to the sugars in fresh fruits and vegetables, and sugars naturally present in milk, because there is no reported evidence of adverse effects of consuming these sugars (24).

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