Sugar in the Spotlight

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Sugar is having a public health moment. In 2015, the World Health Organization (WHO) called on countries to decrease added sugars intake among adults and children to reduce the risk of being overweight, obesity and dental caries.[1] The WHO recommended that added sugars intake be limited to less than 10 percent of daily calories and that a further reduction below 5 percent would provide additional health benefits.

Seventy percent of Americans consume added sugars above the WHO's recommended 10 percent limit.[2] As any dentist can attest, motivating individuals to reduce their added sugars intake will require an armamentarium of interventions targeting a wide range of socioecological influences. Health care professionals can play an essential role in supporting health behavior change at the policy, community and individual levels. This collection of articles in the *Journal of the California Dental Association* is designed to encourage dentists to consider their part in the latest movement to curb nutrition-related chronic disease.

The federal government is off to an encouraging start. On the heels of the WHO call, the *2015-2020 Dietary Guidelines* recommended that Americans limit added sugars intake to less than 10 percent of daily calories,[2] ending decades of vague recommendations to eat "less" sugar. The Food and Drug Administration has already moved to apply the new added sugars limit to food labeling. As of July 26, 2018, manufacturers with $10 million or more in annual food sales will be required to disclose added sugars content and what percentage of the daily-added sugars limit it represents on packaged food nutrition labels.[3] Consumers may reconsider their food choices when they learn that a 20-ounce bottle of Coke contains 65 grams of sugars or 130 percent of the daily limit (based on a 2,000 calorie diet). These new requirements will end labeling practices that have allowed manufactures to hide added sugars content behind more

than 60 names for sugars, such as barley malt, dextrose and maltose. They will also make clear the amount of sugars that are added to savory foods, such as bread, pasta sauce and ketchup.

At the state and local policy level, a number of initiatives are focusing on reducing added sugars consumption through economic incentives, health promotion programs and health risk disclosure.[4] In 2014 Berkeley, Calif., became the first city in the nation to adopt a tax on the distribution of sugar-sweetened beverages and in 2015 the city of Philadelphia became the first large American city to do so. Also notable in these efforts, though occurring too late for inclusion in this issue, are current initiatives on the November 2016 ballot in the cities of Oakland and San Francisco, which would enact one-cent per ounce taxes on the distribution of sugar-sweetened beverages.

A set of articles presents unique perspectives on recent efforts to curb sugary beverage intake. Alisha Somji, MPH, and colleagues present an analysis of media coverage of sugary beverage tax debates, which highlights a shortfall of dental professional voices. Lucy Popova, PhD, reviews evidence supporting the effectiveness of tobacco warning labels and provides lessons that can be applied to sugary beverage warning labels initiatives. She highlights industry efforts to counter warning labels and the important role dentists can play in policymaking by speaking to the strength of evidence linking added sugars consumption to dental caries.

On the subject of the strength of evidence linking added sugars to chronic disease, the second set of articles review emerging evidence of the metabolic effects of fructose. This evidence suggests that the health risks of added sugars consumption extend beyond overweight, obesity and dental caries. These reviews are important for dentists to consider when communicating with patients or policymakers — might Americans' attitudes toward added sugars consumption change if they perceived the risks of consumption to be greater? Robert Lustig, MD, who has been credited with launching the modern antisugar movement, reviews research linking fructose consumption with a new disease: nonalcoholic fatty liver disease (NAFLD). NAFLD has become another chronic disease epidemic, with an alarming prevalence rate in children. Candice Allister Price, PhD, and her colleague Kimber Stanhope, PhD, a leading researcher who conducts clinical studies on the effects of diet on the development of metabolic disease, review research linking added sugars consumption to type 2 diabetes risk. Their review highlights conflicting evidence and new experimental techniques that hold promise for unraveling the true relationship of added sugars to type 2 diabetes.

While dentists have long-discouraged added sugars consumption to improve dental health, sugar's moment in the spotlight offers renewed opportunities for us to engage with diverse stakeholders developing policy and community-level interventions. An August 2016 study,[5] which evaluated Berkeley, Calif.'s, sugary beverage excise tax, passed in March 2015, found a 21 percent drop in sugary beverage consumption in low-income neighborhoods after the tax took effect. During the same time period in San Francisco, where a similar measure was defeated, sugary beverage consumption in low-income neighborhoods increased by 4 percent. These results are a testament to what can be achieved when we move beyond individual-level interventions to address the many layers of influence that intersect to shape a person's food choice. ■

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