Nonnutritive or artificial sweeteners are a growing part of U.S. diets, now consumed by at least one in four children. A new American Academy of Pediatrics (AAP) policy statement offers a summary of the existing data around nonnutritive sweeteners and recommends future research into how they affect children's weight, taste preferences, the risk for diabetes, and long-term safety.

The AAP policy statement "The Use of Nonnutritive Sweeteners in Children" published in the November 2019 Pediatrics (published online Oct. 28), recommends that the amount of these no- or low-calorie sweeteners be listed on product labels so families and researchers can better understand how much children are consuming and any possible health effects.

"Looking at the evidence, we found there's still a lot to learn about the impact of nonnutritive sweeteners on children's health," said Carissa Baker-Smith, MD, MPH, FAAP, lead author of the AAP policy statement and an associate professor of pediatrics at the University of Maryland School of Medicine. "We need more research into the use of nonnutritive sweeteners and the risk for obesity and Type 2 diabetes, especially in children. Considering how many children are regularly consuming these products—which have become ubiquitous—we should have a better understanding of how they impact children's long-term health."

Nonnutritive sweeteners were introduced into the food supply more than 60 years ago to mimic the taste of sucrose (table sugar) without adding calories. Eight nonnutritive sweeteners are approved by the U.S. Food and Drug Administration (FDA). Saccharin, aspartame, acesulfame-potassium, sucralose, neotame and advantame were approved as food additives, while stevia and luo han guo (monk fruit) are approved under the "generally recognized as safe" (GRAS) designation. These products are 180 to 20,000 times sweeter than sugar.

When nonnutritive sweeteners were first introduced, health concerns focused on a potential risk of cancer, which was not borne out in subsequent research. Health concerns around these products now has shifted. As the obesity epidemic has driven increased use of these products, attention is directed at conflicting evidence over whether nonnutritive sweeteners actually help control weight. The majority of short-term studies suggest that substituting a nonnutritive sweetener for sugar may reduce weight gain and promote small amounts of weight loss in children, according to the AAP. However, data is limited. There is also research suggesting possible links between nonnutritive sweetener use and weight gain. In addition, some studies suggest links between nonnutritive sweetener use and changes in appetite and taste preferences, as well as in the gut microbiome, which may affect blood sugar levels and lead to metabolic syndrome, insulin resistance, diabetes and weight gain. But findings remain inconsistent.

The AAP recommends that food and beverage manufacturers report nonnutritive sweetener content on food and beverage labels, rather than just listing them among ingredients, since they are now so widely available and consumed. The National Health and Nutrition Examination Survey 2009-2012 showed that more than one-quarter of U.S. children reported consumption of non-nutritive sweeteners, with 80 percent of these children reporting daily use.

"It is currently hard to know how much nonnutritive sweetener is in a product since manufacturers aren't required to specify," Dr. Baker-Smith said. "Listing the amount of nonnutritive sweetener a product contains would help families and researchers understand how much is actually being consumed by individuals and populations and further evaluate potentially related health effects,"

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Dr. Baker-Smith said.

Research suggests many parents aren't aware their child is consuming these products. One study found that only 23% of parents can correctly identify food products that contain nonnutritive sweeteners. In addition, 53% of parents said they seek items labeled "reduced sugar," but most did not recognize that the sweet taste was instead being provided by a nonnutritive sweetener.

Knowing the amounts of nonnutritive sweeteners in products would also help ensure children's consumption remains below acceptable daily intake levels, Dr. Baker-Smith said. Research suggests that most children's nonnutritive sweetener intake is within the acceptable level, but some has found, based on estimated consumption from 24-hour dietary recall, that intake of nonnutritive sweeteners may exceed the acceptable daily intake.

The new policy statement on nonnutritive sweeteners will be discussed at the educational session, "Separating Fact from Opinion: Nutritional Realities for Pediatricians," during the AAP 2019 National Conference & Exhibition in New Orleans on Monday, Oct. 28.

Provided by American Academy of Pediatrics