

The American Academy of Pediatrics (AAP) and American Heart Association (AHA) warn that policy strategies to reduce children's sugary drink consumption are “urgently needed.”¹ This report identified some positive developments in the nutrition and marketing of children's drinks over the past five years. However, sweetened drinks that contain added sugars and often low-calorie sweeteners continued to dominate sales and advertising of drinks marketed for children's consumption.

Sugary drinks contribute almost one-half of all added sugar consumed by children,² and fruit drinks (fruit-flavored and juice drinks with added sweeteners) are the most common type of sugary drink consumed by young children, including toddlers and preschoolers.^{3,4} Excess juice consumption among toddlers and preschoolers also raises concerns among health and nutrition experts,^{5,6} as it contributes to excess calorie intake, malnutrition, and other negative health consequences.^{7,8} Furthermore, sugary drink consumption is higher among young non-Hispanic Black children,⁹ and juice consumption is higher among Hispanic and non-Hispanic Black children compared to non-Hispanic White children of the same age.^{10,11}

This Children's Drink FACTS report assesses the sales, nutrition, and marketing of children's drinks, defined as drinks that companies market as intended for children to consume (in marketing to parents and/or directly to children). It updates previous Sugary Drink FACTS reports published in 2010¹² and 2014,¹³ with a focus on children's drink products, including both sweetened drinks and drinks without added sweeteners. It also examines changes in children's drink nutrition and marketing from 2014 to 2019.

Methods and scope

In this report, we analyze children's drinks that contained added sugars and/or low-calorie sweeteners (i.e., fruit drink, flavored water, and drink mix categories) and children's drinks without added sweeteners (i.e., 100% juice, juice/water blend, and plain water/seltzer categories).

- Using sales data from IRI (a market research firm), we examined products in its juice, fruit drink, and water categories and selected all brands with at least \$10 million in sales in 2018.
- Researchers then visited brand websites to identify any sub-brands marketed as specifically for children, including through images and/or text depicting parents serving the product to their children.

- We also obtained IRI data for the sports drink and iced tea categories, but no brands marketed children's products in those categories so they were excluded from the analysis.

Utilizing the same methods as previous FACTS reports, we collected data on the nutrition content and marketing of children's drinks by category, company, and brand, and assessed changes in the past five years when possible. Advertising spending in all media (including TV, magazines, and digital) and TV exposure data were licensed from Nielsen.

Analyses include:

- Sales of children's drinks by category and comparisons to sales of all other drinks (i.e., not children's drinks) in the same categories (2018);
- Nutrition content and ingredients in children's drinks (including all package types and sizes listed on brand websites) (May 2019);
- Claims and other marketing messages on children's drink product packages (March 2019);
- Total advertising spending (in all media) for children's drinks and other drinks in the same categories (2018);
- Exposure to TV advertising for children's drinks and other drinks by preschoolers (2-5 years) and children (6-11 years), including advertising directed to children (2018);
- TV advertising targeted to Black and Hispanic consumers, including on Spanish-language TV (2018).

In addition, we identified children's drinks that met expert recommendations for healthier beverages choices for children by age group, including:

- Consensus Statement on Healthy Beverage Consumption in Early Childhood from AAP, AHA, the Academy of Nutrition and Dietetics, and the American Academy of Pediatric Dentistry;¹⁴
- Healthy Eating Research (HER) Recommendations for Healthier Beverages for children up to age 18;¹⁵
- U.S. Department of Agriculture (USDA) Smart Snacks in School nutrition standards for beverages that can be sold to children in elementary schools;¹⁶ and
- AAP recommendations for maximum daily 100% juice intake by children.¹⁷

Results

Our analyses identified 23 children's drink brands and 67 sub-brands (or varieties) as of August 2019. Children's drink sub-brands included sweetened drinks (fruit drinks, flavored waters, and drink mixes) and drinks without added sweeteners (100% juice and juice/water blends). There was one unsweetened sparkling water for children.

Sales of children's drinks

- Sales of all juice, fruit drink, and water products totaled \$22.9 billion in 2018. Children's drinks in these categories totaled \$2.2 billion, representing 10% of all sales.
- Sweetened drinks contributed almost two-thirds (62%) of children's drink sales in 2018, including \$1.2 billion in fruit drink (90% of children's sweetened drink sales) and \$146 million in flavored water sales.
- 100% juice represented 80% of sales (\$669 million) of children's drinks without added sweeteners. Children's juice/water blends, which contained juice and water with no added sugars or low-calorie sweeteners, sold \$169 million in 2018.
- Sales of all unsweetened plain and sparkling waters totaled \$13.8 billion in 2018 (60% of total sales in the categories examined), but children's products in these categories represented just 0.01% of all children's drink sales.

Nutrition of children's sweetened drinks

- Sweetened children's drinks included 32 fruit drink, 6 flavored water, and 6 drink mix products (i.e., unique package types/sizes). Of the fruit drinks analyzed, 34% (11 products) qualified as reduced-calorie (i.e., ≤ 40 kcal/8-oz).
- Overall, 65% of children's sweetened drinks contained added sugars, 74% contained low-calorie sweeteners, and 38% contained both. Just 35% contained any juice.
- Regular children's fruit drinks contained a median of 65 calories per serving (ranging from 30-200 kcal) and 16 grams of total sugar (ranging from 6-52 g); the median juice content was 5% (ranging from 0-42%). One-half of these sub-brands also contained low-calorie sweeteners.
- Reduced-calorie children's fruit drinks contained a median of 15 calories (0-30 kcal), 2 grams of sugar (0-7 g), and 0% juice (0-18%). All contained low-calorie sweeteners, and one-half also contained added sugars.
- Children's flavored waters contained a median of 30 calories (0-40 kcal) and 7 grams of sugar (0-13 g). One product contained 10% juice (Apple & Eve Water Fruits), while the remaining five products contained low-calorie sweeteners and no juice. These products self-identified as a "water beverage" on the product package, but most were similar in nutrition to reduced-calorie children's fruit drinks.
- Due to the added sugars and/or low-calorie sweeteners contained in sweetened children's drink products, none of them met expert recommendations for drinks that should be served to children under 14 years old or that could be sold to children in elementary or middle schools.
- One serving of 11 of the children's fruit drinks analyzed had more than 50% of the recommended amount of daily

added sugar for children (i.e., >12.5 g), including many of the highest-selling brands (Capri Sun Juice Drink, Hawaiian Punch, Sunny D, and Minute Maid Lemonade).

Nutrition of children's drinks without added sweeteners

- Children's drinks without added sweeteners included 29 100% juice and 16 juice/water blend products.
- The nutrition content of 100% juice products did not vary widely (total sugar of 3-4 g/oz) as the only ingredients were fruit juice or fruit juice concentrate and water.
- The majority of children's 100% juice boxes and pouches (9 of 13 products) contained more than 4 ounces of juice (i.e., the maximum daily amount recommended for toddlers 1-3 years old), and four single-serving packages contained more than 6 ounces (i.e., the maximum daily amount of juice recommended for young children 4-6 years old).
- The juice/water blend category had the healthiest children's drink products. These products consisted of juice and water with no added sugars or low-calorie sweeteners. They contained a median of 46 calories, 10 grams of total sugars, and 50% juice per serving.
- Juice/water blend products all came in single-serving packages (4.23- to 6.75-oz boxes and pouches). Only one of the 13 packages contained more than the recommended daily amount of juice for a toddler.

Claims on product packages

Researchers coded nutrition-related and other marketing messages on 101 unique product packages (i.e., packages with different messages) of the 67 sub-brands in our analysis.

- Sweetened children's drink packages averaged 2.1 ingredient claims, 1.3 other health-related messages, and 1.0 "real" claims (i.e., messages that describe the product as real, natural, and/or organic) on the majority of packages.
- Compared to sweetened drink packages, children's drinks without added sweeteners featured similar types of claims, but somewhat more claims per package, averaging 3.8 ingredient claims, 1.1 other health-related messages, and 2.2 real claims on the majority of packages.
- Images of fruit appeared on 85% of children's sweetened drink packages (regardless of whether the product contained any fruit juice). Claims about sugar content appeared on 62%, and Vitamin C claims (i.e., "good source" or "% daily value") appeared on 46% of sweetened drinks.
- Sugar claims on sweetened children's drinks consisted primarily of "no high fructose corn syrup" and "less sugar" or "low-sugar" claims, including comparisons to the sugar in "leading juice drinks" or the "leading regular soda."

- The majority of children's drinks that contained low-calorie sweeteners also featured less or low-sugar claims, but did not indicate any other types of sweeteners on the package front. None of these drinks used the term "diet" on product packaging, and just one (Hawaiian Punch Light) identified itself as a "light" drink.
- Among sweetened drink categories, children's flavored water packages contained more ingredient, health-related, and real claims than fruit drinks or drink mixes. They averaged 2.2 sugar claims per package, including "no high fructose corn syrup" (on all but one package) and "no artificial sweeteners" on products that contained stevia low-calorie sweetener (1/3 of packages).
- Some health-related messages were unique to the flavored water category, including messages about children's hydration (on more than 80% of packages) and exercise promotion.

Other marketing messages on product packages

- Child features (including cartoons, brand characters, fun/cool/extreme references, and wacky names) were common on children's drink packages. Sweetened drinks contained more child features (90% of packages averaged 2.2 each) compared to drinks without added sweeteners (71% averaged 1.0 each).
- Among unsweetened children drinks in our analysis, the one sparkling water (Polar Seltzer Jr) stood out with three child features per package, including cartoon images, fun references, and wacky names (e.g., Unicorn Kisses, Yeti Mischief).
- Only one sweetened children's drink in this analysis featured a licensed character (Good 2 Grow Organic 75% Less Sugar with collectible children's character tops). The only other promotion on sweetened children's drinks was a corporate-level cause marketing program (Let's Play) found on all Dr Pepper Snapple Group products.
- In contrast to other child features, children's drinks without added sweeteners were more likely to use licensed characters. Approximately 20% of 100% juice and juice/water blend packages featured licensed characters (including Disney, Sesame Street, and other popular children's media characters).
- Messages about recycling and/or the environment was another common type of on-package marketing, especially for flavored waters (appearing on 80% of packages).
- Spanish-language text appeared on 40% of drink mix packages and approximately one-quarter of fruit drink and 100% juice packages.
- There were no celebrity or sports promotions on any children's drinks in our analysis.

Cross-branding of children's drinks

- Five of the children's brands that offered 100% juice and juice/water blend products also offered sweetened children's drinks (including fruit drinks and flavored waters): Apple & Eve, Capri Sun, Good 2 Grow, Minute Maid, and Mott's.
- Package sizes and types, flavor names, fruit images on package fronts, and front-of-package claims for products offered by these brands were similar across product categories – including both sweetened drinks and drinks without added sweeteners.
- The only message on the package front to distinguish between products by category was "100% juice," which appeared on all 100% juice products.
- For products in other categories, information about percent juice and types of sweeteners contained in the product was only available on the nutrition facts panel on the back of the package.

Advertising spending

- In 2018 across all types of media, children's 100% juice and juice/water blends had higher advertising expenditures than sweetened children's drinks (fruit drinks and flavored waters): \$34.4 million vs. \$20.7 million.
- In contrast, children's fruit drinks and flavored waters spent more to advertise on TV than children's 100% juices and juice/water blends (\$18.5 vs. \$13.6 million).
- Advertising of children's drinks was highly concentrated among a minority of the large beverage companies and children's brands. Just three companies (Kraft Heinz, Coca-Cola, and Harvest Hill Beverages) and four of 22 children's brands (Kool-Aid, Capri Sun, Minute Maid Lemonade, and Sunny D) advertised their sweetened children's drinks.
- The same three companies plus Dr Pepper Snapple Group were also responsible for 99% of advertising spending on children's drinks without added sweeteners.
- The one brand in our analysis with a children's sparkling water did not advertise its children's drink (Polar Seltzer Jr.) at all.
- Two children's juice/water blends (Capri Sun Refreshers and Mott's Sensibles) and one 100% juice (Juicy Juice) advertised heavily to parents in magazines (\$20.0 million combined), but had no child-directed TV advertising.
- Children's drinks represented 16% of total advertising spending for all drinks in the categories examined, including 31% of spending on fruit drink advertising and 71% of spending on juice/water blends.

- For all brands in this analysis combined (including children's brands and other brands), there was a 57% decline in total advertising spending for sweetened fruit drinks and flavored waters from 2010 to 2018. Advertising spending on sweetened children's drinks declined by 83% during this time.
- At the same time, total advertising spending on drinks without added sweeteners remained unchanged. A 56% decline in advertising spending for 100% juice was offset by a 38% increase in advertising for juice/water blends and a 70% increase in advertising for plain and sparkling waters.

Children's exposure to TV advertising

- Although companies spent less to advertise sweetened children's drinks than they spent to advertise children's drinks without added sweeteners in 2018, preschoolers (2-5 years) and children (6-11 years) saw more than twice as many TV ads for children's sweetened drinks than for children's drinks without added sweeteners (38.3 vs. 16.7 for preschoolers in 2018 and 45.4 vs. 19.7 children).
- Compared to adults, children were more likely to see ads for children's fruit drinks, flavored waters, and juice/water blends, but less likely to see ads for children's 100% juice (which was advertised primarily to parents).
- From 2010 to 2013, preschoolers' and children's exposure to TV ads for sweetened children's drinks declined by more than 50%. However, from 2013 to 2018 exposure declined by just 2% for preschoolers and 7% for children.
- In 2018, Kraft Heinz was the only company to advertise children's drinks directly to children on children's TV programming. Two of its three advertised children's drink brands were sweetened drinks (Kool-Aid Jammers fruit drink and Capri Sun Roarin' Waters flavored water). Capri Sun Organic was the only children's juice/water blend advertised directly to children.
- Preschoolers and children also saw TV ads for other drinks (i.e., not children's drinks) in the categories examined in this report, with sweetened drink ads outnumbering ads for drinks without added sweeteners in 2018. Preschoolers viewed 55.9 and 52.2 ads in 2018, for sweetened and unsweetened drinks, respectively, while children viewed 62.3 and 52.3 ads
- Kraft Heinz brands represented approximately two-thirds of TV ads for all sweetened drinks seen by preschoolers and children, while Coca-Cola brands represented another approximately 15%.
- Exposure to TV ads for all drinks without added sweeteners was somewhat less concentrated, with Kraft Heinz, Coca-Cola, PepsiCo, Nestle, and Wonderful responsible for more than 90% of TV ads viewed by preschoolers and children.

Targeted marketing

- Only three children's drink sub-brands across all categories advertised on Spanish-language TV in 2018.
- Capri Sun Juice Drink and Sunny D fruit drinks each devoted approximately one-quarter of their TV advertising spending to Spanish-language TV.
- Capri Sun Refreshers juice/water blends also spent a small amount (approximately \$100,000) to advertise on Spanish-language TV.
- No other children's drink brand or any other brand in the juice, fruit drink, or water categories advertised on Spanish-language TV in 2018.
- Black preschoolers and children saw 79% and 77% more TV ads for all drinks in our analysis compared to White preschoolers and children in 2018, but differences varied by category. Black preschoolers and children saw approximately 85% more ads for flavored water and sparkling water products, but just 25% more ads for plain water products (this category did not include any children's drinks).
- Sweetened drink brands with the highest ratios of ads viewed by Black preschoolers and children compared to White preschoolers and children (exceeding 2.0, or twice as many ads viewed) included Minute Maid Lemonade (a children's fruit drink) and Glaceau Vitamin Water (not a children's drink).
- Black preschoolers and children also saw more than twice as many ads for four 100% juice brands and one sparkling water brand, including two children's drinks (Minute Maid Orange Juice and 100% Juice).

Discussion

These findings highlight some positive developments in the nutrition and marketing of healthier children's drinks:

- Juice/water blends can provide a lower-calorie lower-sugar option for young children than 100% juice, and they are more likely to come in single-serving boxes or pouches that would be an appropriate size for toddlers ages 1 to 3 (i.e., ≤ 4 oz of 100% juice or equivalent).
- Several children's drink brands appeared to actively market juice/water blends to parents, and parents are purchasing them.
- The one children's unsweetened water in our analysis appeared to appeal directly to children using common child-directed marketing features on packages, which could help parents' efforts to get their children to drink more plain water.

- With one exception, children's 100% juice and juice/water blends were the only products with licensed characters or other children's media promotions on their packages. In contrast to previous years, only one children's sweetened drink product featured licensed characters in 2019.
- Beverage companies may have reallocated their total advertising expenditures (for non-children's drinks primarily) to focus less on sweetened fruit drinks and flavored waters, and more on healthier drinks, including plain and sparkling waters and juice/water blends.

However, we also identified common practices that may confuse parents about the ingredients and healthfulness of sweetened children's drinks.

- The widespread use of low-calorie sweeteners in children's drinks, including drinks with added sugars, is concerning. Experts do not recommend serving products with low-calorie sweeteners to children under age 14.¹⁸⁻²⁰
- Furthermore, previous research has shown that the majority of parents studied reported believing that nonnutritive (i.e., low-calorie) sweeteners are not safe for children.²¹⁻²³ Therefore, it appears that parents may not be aware that most sweetened children's drinks contained these sweeteners.
- The sugar content and calories in the majority of children's fruit drinks also raise concerns, as many of these drinks contained more than one-half of a child's recommended maximum daily intake of added sugars.
- Children's flavored waters were often positioned as lower-sugar beverages for "hydration" and "exercise," which may lead to misperceptions about product healthfulness.
- Most children's 100% juice products came in single-serving boxes or pouches that contained more than the recommended maximum daily amount of juice for toddlers (1-3 years), and some contained more juice than recommended for preschoolers (4-6 years).
- Cross-branding by major children's drink brands that offer both sweetened and healthier drink products may further confuse parents about the ingredients and healthfulness of the drinks they purchase for their children.

In addition, advertising of sweetened drinks directed to children and targeted advertising to Hispanic and Black children continue to raise concerns.

- Despite a trend to increase advertising for healthier drinks to consumers in general, preschoolers and children continued to see more ads for sweetened children's drinks than for 100% juice and juice/water blends.
- Only one company (Kraft Heinz, a Children's Food and Beverage Advertising Initiative [CFBAI] industry self-regulatory program participant) advertised sweetened

drinks directly to children on children's TV. These low-calorie products were exempt from meeting CFBAI nutrition standards for products that may be advertised in child-directed media, even under revised CFBAI nutrition standards to be implemented in 2020.²⁴ However, these products contain both added sugars and low-calorie sweeteners, so they do not meet expert recommendations for healthier beverages for children under age 14.^{25,26}

- The amount of time preschoolers and children spent watching TV declined by 35% and 42%, respectively, from 2013 to 2018, so children's exposure to TV ads for sweetened children's drinks should have declined by a similar amount. However, children's exposure remained approximately the same, which indicates that companies offset the decline in viewing times by placing more ads in the programming that children viewed.²⁷
- Two of the three children's drink brands that advertised on Spanish-language TV (Capri Sun Juice Drink and Sunny D) did not meet CFBAI nutrition standards and could not advertise on children's TV programming. However, this advertising does not violate CFBAI pledges as Spanish-language TV programming does not meet the CFBAI definition of child-directed TV.
- One brand (Minute Maid) appeared to target Black children directly with advertising for children's drinks, including Minute Maid Lemonade sweetened fruit drink.

Recommendations

This report highlights potential actions by key stakeholders – including industry, policy makers, advocates, and healthcare providers – that would help encourage reduced consumption of sugary drinks by children.

Beverage manufacturers, retailers, and media companies should do more to encourage healthier options over sweetened drinks for children:

- In addition to juice/water blends with lower calories and no added sweeteners, manufacturers should develop and market unsweetened plain waters for children.
- CFBAI nutrition standards for products that can be advertised in child-directed media should conform with expert recommendations for healthier drinks for children. They should not exempt reduced-calorie drinks that contain low-calorie sweeteners and/or added sugars from meeting their standards.
- CFBAI nutrition standards should apply to children's drink advertising on Spanish-language TV.
- Media companies with children's programming (in addition to Disney) should implement nutrition standards that comply with expert recommendations for products that can

be advertised to children in their media and for character licenses.

- The front of children's drink packages should clearly indicate the percent juice and added sweetener content, including low-calorie sweeteners and added sugars.
- Children's drink brands should eliminate cross-branding of products that include both sweetened drinks and healthier options.
- Retailers should clearly label children's drinks that contain added sweeteners (e.g., with shelf tags) and/or place sweetened children's drinks and flavored waters in a separate location from 100% juice and juice/water blends.

Federal regulation and state and local actions could encourage selection of healthier drink options for children:

- Public health campaigns to reduce sugary drink consumption should highlight that children's fruit drinks and flavored waters contain added sugars and help educate consumers on how to differentiate them from 100% juice and juice/water blends that do not contain added sweeteners.
- State and local legislators could require that retailers separate sweetened fruit drinks and flavored waters from 100% juice and juice/water blends on store shelves.
- The U.S. Food and Drug Administration (FDA) could establish regulations to address unclear labeling practices, such as requiring disclosures of sweeteners (added sugars and low-calorie sweeteners) and juice content on the front of packages.
- The FDA could require that products with nutrition-related claims on product packaging meet minimum nutrition standards.

- The FDA could prohibit the use of fruit and vegetable images on packages of drink products that contain little or no juice.
- States should increase the price of sugary drinks, including children's fruit drinks and flavored waters, through an excise tax, with tax revenue allocated to local efforts to reduce health and socioeconomic disparities.

Child health advocates and health practitioners can also play an important role:

- The revised 2020-2025 Dietary Guidelines for Americans should address the full range of children's drink products available on the market, including drinks with low-calorie sweeteners, and USDA should provide clear guidelines and educational materials to help parents identify the healthiest options for their children.
- Healthcare professional organizations and/or public health organizations should develop campaigns to educate parents about how to identify healthier children's drinks.
- Healthcare professionals, including pediatricians, dentists, and nutritionists, should counsel their patients about the sugar content and other ingredients in children's drinks and reinforce the importance of providing unsweetened water and milk to children.

Marketing of children's drinks should not contribute to the public health crisis fueled by excess sugar consumption by children. As detailed in this report, much more is required for beverage manufacturers and other key actors to demonstrate their commitment to reducing children's consumption of sweetened drinks that can harm their health. They should help caregivers identify and encourage children to consume healthier drinks that do not contain added sweeteners.