

Sweet Excess

Largest Restaurant Chains Consistently Serve Up Drinks with More than a Day's Worth of Added Sugars

A Restaurant Menu Survey

As the U.S. looks toward the end of the COVID-19 pandemic, Americans are starting to return to restaurants, offering an opportunity for a fresh look at the restaurant food environment.

Polls show that health-conscious consumers are seeking to cut back on added sugars, especially those found in sugary drinks like full-calorie soda.ⁱ Sugary drinks contribute to type 2 diabetes and heart diseaseⁱⁱ—in part by leading to weight gainⁱⁱⁱ—and are linked to a higher risk of dental cavities.^{iv}

Warning icons, like the sodium icons now required on restaurant menus in New York City and Philadelphia, are a powerful policy tool to inform consumers and encourage the food industry to present healthier choices.

State and local jurisdictions are currently considering laws that would require such icons on restaurant items with high levels of added sugars. One such proposal in New York City, Int. 1326, would require a warning icon on menu items that exceed the 50 gram “Daily Value” for added sugars, a recommended limit set by the Food and Drug Administration (FDA) for a 2,000-calorie diet.^{iv}

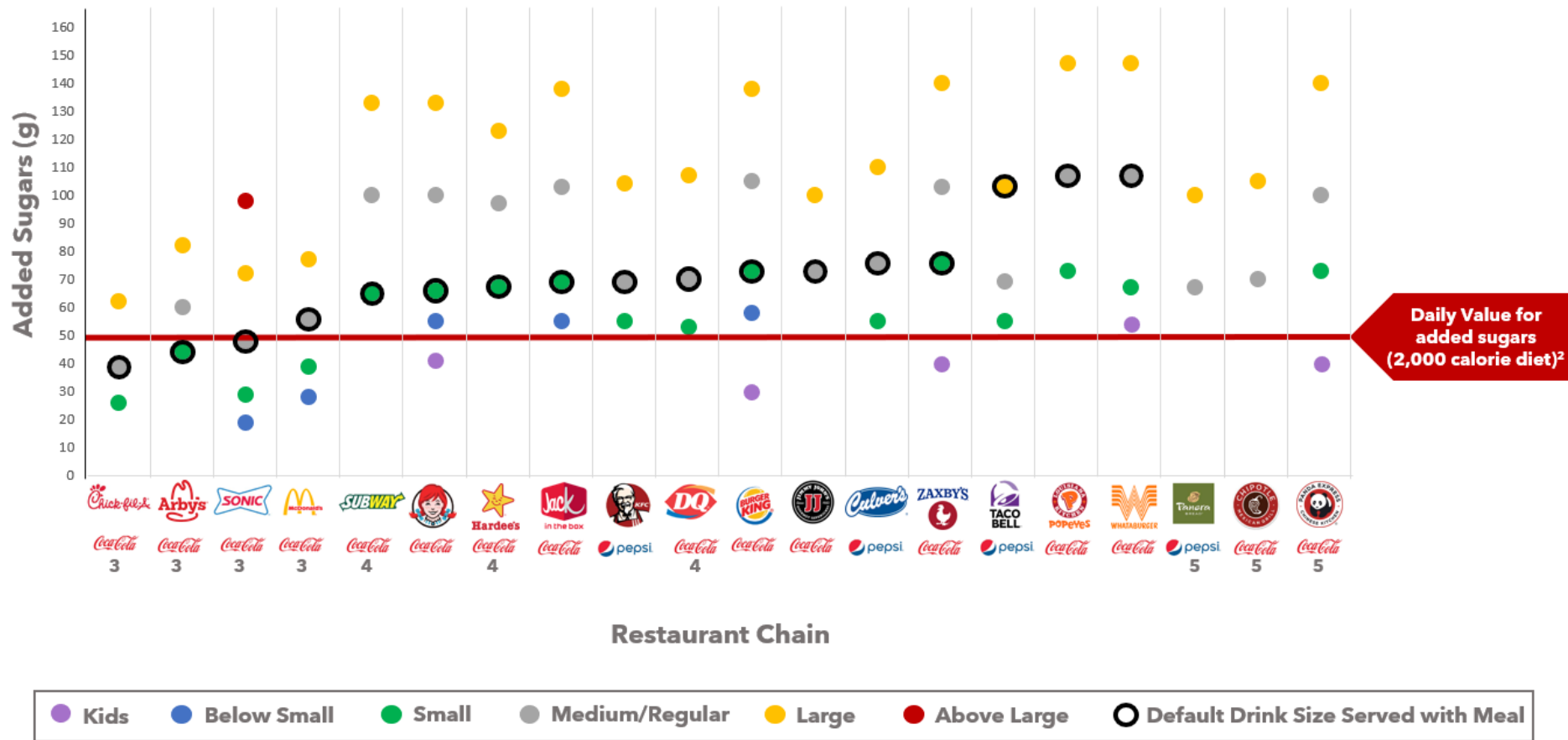
Fountain drinks are a major source of added sugars in restaurant meals. To see which chain restaurant drinks exceed the Daily Value for added sugars, the Center for Science in the Public Interest (CSPI) assessed the amounts of added sugars in full-calorie cola fountain drinks across the top 20 chains, by revenue.

Our survey, conducted in March 2021, found that the largest chains consistently serve up drinks with more than a day’s worth of added sugars, indicating a strong need for added sugars icons to inform consumers and encourage chains to reduce the added sugars sold in drinks (full survey methods in Appendix).

Key Findings

- Most fast-food chains we surveyed exceed the Daily Value for added sugars for all sizes except “kid’s,” packing more than a day and a half worth of added sugars in to a single “medium” or “regular” cola, and two days’ worth into a “large.”
- Even “small” drinks can exceed the Daily Value: of the 17 chains offering a “small” fountain cola, 13 supply more than the Daily Value for added sugars.
- The “default” drink size included with combination meals contains more than the Daily Value for 14 of the 17 chains that include drinks with combination meals.
- The amount of added sugars in the same size cola (e.g. “small”) varies by as much as threefold from chain to chain.

Added Sugars¹ (g) in Full-Calorie Cola Fountain Drinks at Top 20 Chain Restaurants



- ¹ Converted from total sugars reported by chain; most chains assume 0% ice fill / 100% drink fill line
- ² 2,000 calorie Daily Value is for adults and children ages 4+
- ³ Chains assume 1/3 to full cup ice fill (See Appendix, Table 2)
- ⁴ No nutrition information reported by chain; CSPI estimate assumes 0% ice fill / 100% drink fill line
- ⁵ No default drink served with meal

Most Chains Exceed the Daily Value for Added Sugars for All Sizes Except Kid's

Added sugars in full-calorie cola fountain drinks across all 20 major chains are presented in Figure 1. The median, or midpoint, amount of sugar for each size across these same chains is reported in Table 1.

All of the chains in our study offered either Pepsi or Coca-Cola, and none offered both.

Our survey found that the median fountain cola exceeded the Daily Value for all sizes except “kid’s” size.

For “medium” or “regular” drinks, which were sold by all chains, the median was 75 grams, or 150 percent of the Daily Value for added sugars. Eighteen of 20 exceeded the Daily Value for added sugars.

For “large” sized drinks, also sold by all chains, the median was 109 grams of added sugars. All 20 exceeded the Daily Value for added sugars.

That means most of the fast-food chains we surveyed pack more than a day and a half worth of added sugars in to a single “medium” or “regular” cola, and two days’ worth into a “large.”

| Size | Median, grams | %DV | Exceeding DV/Total |
|----------------|----------------------|------------|---------------------------|
| Kid's* | 40g | 80% | 1/5 |
| Below Small* | 53g | 106% | 3/5 |
| Small* | 65g | 130% | 13/17 |
| Medium/Regular | 75g | 150% | 18/20 |
| Large | 109g | 218% | 20/20 |
| Default* | 70g | 140% | 14/17 |

* Only one chain offered a size above large (Sonic: 98g of sugar), not represented in the Table.

Even “Small” Sized Drinks Can Exceed the Daily Value for Added Sugars

Most “small” beverages can hold enough cola to exceed the Daily Value. Among the 17 chains offering a “small” cola fountain drink, 13 supply more than the Daily Value for added sugars.

While most major chains (15/20) do not market soda using “kid’s” sizes, the five chains that do so contain extreme amounts of added sugars:

- The smallest “kid’s” size, sold by Burger King, contains 30 grams of added sugars, or 60 percent of the Daily Value.
- The largest, sold by Whataburger, contains 54 grams of added sugars, or more than the 50 gram Daily Value.

While we compared all beverages to the 50-gram Daily Value established for adults and children aged 4 and up based on a 2,000-calorie diet, the amounts are even higher relative to the Daily Value for kids aged 1 to 3 years. That Daily Value is 25 grams of added sugar based on a 1,000- calorie diet. All of the “kid’s” sized drinks exceeded a full day’s worth of added sugars based on the 25 gram Daily Value for 1- to 3-year-olds.

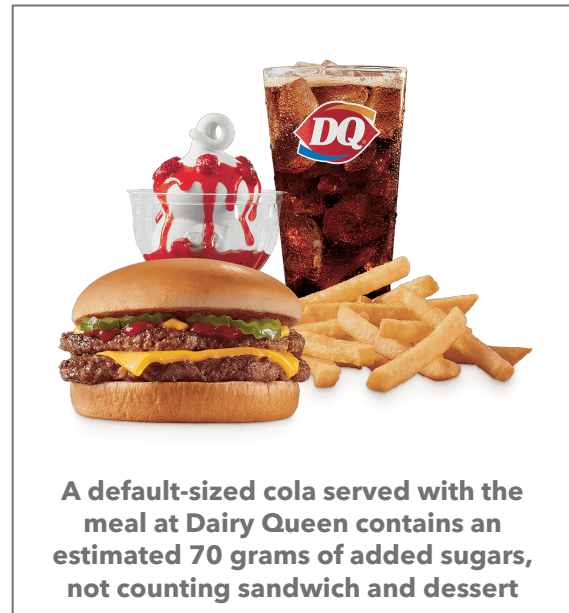
Fast-Food Chains Sell Extreme Amounts of Added Sugars in the Drinks with Meals

Many of the leading fast-food chains offer a combination meal that includes a drink. Consumers have the option to take the default drink size or can opt to upsize or downsize for a different price.

Among chains that offer such “default” beverages with their combination meal, 14 of 17 exceed the Daily Value for added sugars. The median default meal beverage cup size supplies 70 grams of added sugars, or 140 percent of the Daily Value.

These amounts are just the added sugars from the drink; other items in the meal, like sauces and desserts, often provide additional added sugars.

For example, the Dairy Queen’s default meal cola contains an estimated^{vi} 70 grams of added sugars, the median amount among the top 17 chains offering drinks with meals. Yet this drink is just one part of a “meal deal” that includes an entrée (0 to 16 grams of sugar), fries (0 to 1 grams of sugar), and a small sundae (28 to 41 grams of sugar), which contribute an additional 28 to 58 grams of sugars to the meal.^{vii}



The Amount of Added Sugars in the Same Size Cola Varies from Chain to Chain

Basing one’s drink selection on size (small, medium or large) can be misleading because the amount of added sugars in the same size cola varies widely from chain to chain. For a “small,” the range is 26g-76g across the top 17 chains with this size, a threefold difference. For a “medium,” the range was 39g-107g (a difference of 2.7 times); and for a “large,” the range was 62g-147g (a difference of 2.3 times).

Some of this variation is due to the amount of ice that the chains include in their nutrition calculations. Most chains (16 of the sample in the survey) include no ice. Four chains include between one-third and a full container of ice (*See Table 2, Appendix*). Ice displaces half its volume in soda, so a chain can reduce the amount of added sugars it reports by 50 percent if it assumes a full cup of ice in its nutrition calculations.

Values that have been adjusted for ice fill also may not reflect what customers actually get in the store because the ice used can vary from location to location. For example, Chick-fil-A’s online nutrition information assumes either $\frac{3}{4}$ or the full container is filled with ice, depending on the size. But when we contacted a local Chick-fil-A franchisee in Washington, DC to ask how much ice they use when pouring sodas, the staff reported that they filled only half the cup with ice.

Added Sugars in Cola are Similar to Other Full-Calorie Sodas Sold in Major Chains

While our survey focused on full-calorie colas, other full-calorie sodas sold at major chains contain similar levels of added sugars. A 12-ounce Coca-Cola sold at retail has 39 grams of added sugars, and a Pepsi 41 grams, compared with 37g in Sierra Mist, 38g in Sprite and 7-Up, 40g in Dr. Pepper, 44g in Fanta Orange, and 46g in Mountain Dew.

Recommendations for Communities, Restaurants, and Consumers

Americans returning to restaurants this summer have a chance to take a fresh look at the restaurant food environment. While many of us are seeking to cut down on added sugars, most fast-food chains continue to ensure that even its smallest sizes hold more than a day's worth of added sugars in a single serving of full-calorie soda.

Communities, restaurants, and individuals can all take actions now to support healthier choices in restaurants, including providing drinks with lower added sugars. To reduce added sugars from fountain drinks:

Communities Should...

Support laws to curb the marketing of extreme sugary drinks in chain restaurant meals, including state and local policies requiring warning icons on menus that show when a drink has excessive added sugars.

Restaurants Should...

Reduce added sugars in full-calorie soda orders by offering smaller standard cup sizes for fountain drinks. Also make sure free clean drinking water is available to customers from a tap or water cooler and promote water or other low- or no-calorie options like flavored seltzers or diet soda with combination meals.

Consumers Should...

Swap full-calorie drinks for low- or no-calorie options like water, flavored seltzer, or diet soda. Carrying a refillable water bottle is another way to drink healthier, generate less packaging waste, and save money on the meal if the restaurant charges for water. If ordering a full-calorie drink, order the smallest available size, add plenty of ice, and do not feel obligated to finish it.

For more information, please contact the Center for Science in the Public Interest at policy@cspinet.org.

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Appendix: Methods

Added Sugars Calculations (Figure 1, Table 1)

We used “Ranked: The 50 Most Popular Fast-Food Chains in America”^{viii} to identify the top 20 fast food chains by revenue among those offering fountain drinks. Five of the top chains by revenue, Starbucks, Dunkin’, Domino’s, Pizza Hut, and Little Caesars, were not included in our set of 20 because they do not serve fountain drinks. These were replaced by the next five that served fountain drinks.

We identified the cola beverage offered at each chain using the chain’s national website. All the chains in the study offered either Pepsi Cola or Coca-Cola as their cola beverage, and none offered both.

We took the total sugar reported in the chain’s nutrition facts and converted that directly to added sugars because all of the sugars in full-calorie Pepsi Cola or Coca-Cola are from added sugars.

While all chains are required by federal law to report the total sugar for fountain drinks,^{ix} we found that two chains, Dairy Queen and Hardee’s, did not provide their nutrition information online, and Subway offered nutrition information only for its 20-ounce size. These chains also did not provide the information on request when we contacted the corporate offices and multiple individual locations by telephone.

Therefore, we estimated added sugars for these three chains based on cup size in ounces and the sugar per ounce for Coca-Cola (all three chains sold Coca-Cola), assuming a standard sugar-to-volume ratio for “legacy fountain” Coca-Cola (default 4.5 Bag In Box (BIB) ratio, a measure used to describe the ratio between syrup and final volume) and a zero percent ice fill (the most common way the other chains calculated ice fill).

Estimated Ice Fill Calculations (Table 2)

Four chains reported added sugars that were substantially below what would be expected for zero percent ice fill. For these, we assessed the extent of ice fill by calculating the amount of ice fill that would be necessary to yield the nutritional information provided for each cup volume. The results appear in Table 2, rounded to the nearest standard household measure ($\frac{1}{4}$, $\frac{1}{3}$, $\frac{1}{2}$, $\frac{2}{3}$, $\frac{3}{4}$ or full container).

| | Below Small | Small | Medium | Large | Above Large |
|-------------|---------------|---------------|---------------|---------------|---------------|
| McDonald’s | $\frac{2}{3}$ | $\frac{1}{2}$ | $\frac{1}{3}$ | $\frac{1}{2}$ | - |
| Sonic | Full | $\frac{3}{4}$ | $\frac{2}{3}$ | $\frac{2}{3}$ | $\frac{2}{3}$ |
| Arby’s | - | $\frac{3}{4}$ | $\frac{3}{4}$ | $\frac{3}{4}$ | $\frac{3}{4}$ |
| Chick-fil-A | - | Full | Full | $\frac{3}{4}$ | - |

* Assumes 100% drink fill line, rounded these to nearest standard fraction ($\frac{1}{4}$, $\frac{1}{3}$, $\frac{1}{2}$, $\frac{2}{3}$, $\frac{3}{4}$ or full container).

ⁱ International Food Information Council. 2020 Food & Health Survey. June 2020. <https://foodinsight.org/wp-content/uploads/2020/06/IFIC-Food-and-Health-Survey-2020.pdf>.

ⁱⁱ Malik VS, Hu FB. Sugar-sweetened beverages and cardiometabolic health: An update of the evidence. *Nutrients* 2019;11(8):1840.

ⁱⁱⁱ Ruyter JC, Olthof MR, Seidell JC, Katan MB, A Trial of Sugar-Sweetened Beverages and Body Weight in Children. *N Engl J Med* 2012; 367:1397-1406.

^{iv} Valenzuela MJ, Waterhouse B, Aggarwal VR, Bloor K, Doran T. Effect of sugar-sweetened beverages on oral health: a systematic review and meta-analysis. *Eur J Public Health* 2020;31(1):122-129.

^v 21 C.F.R. § 101.9.

^{vi} Dairy Queen does not report nutrition information for fountain drinks, CSPI estimated added sugars for Dairy Queen based on cup size assuming a 0 percent ice fill and 100% drink fill line.

^{vii} Dairy Queen sundaes include non-fat milk and whey, sources of natural sugar, as well as sugar and corn syrup, sources of added sugars. See, e.g. <https://www.dairyqueen.com/en-us/menu/hot-fudge-sundae/>.

^{viii} Visual Capitalist. Ranked: The 50 Most Popular Fast Food Chains in America. September 28, 2020. <https://www.visualcapitalist.com/top-50-fast-food-chains-ranked/>.

^{ix} Food and Drug Administration. A Labeling Guide for Restaurants and Retail Establishments Selling Away-From-Home Foods - Part II (Menu Labeling Requirements in Accordance with 21 CFR 101.11): Guidance for Industry. April 2016.