

The evolution of sugar reduction

Insights
Report



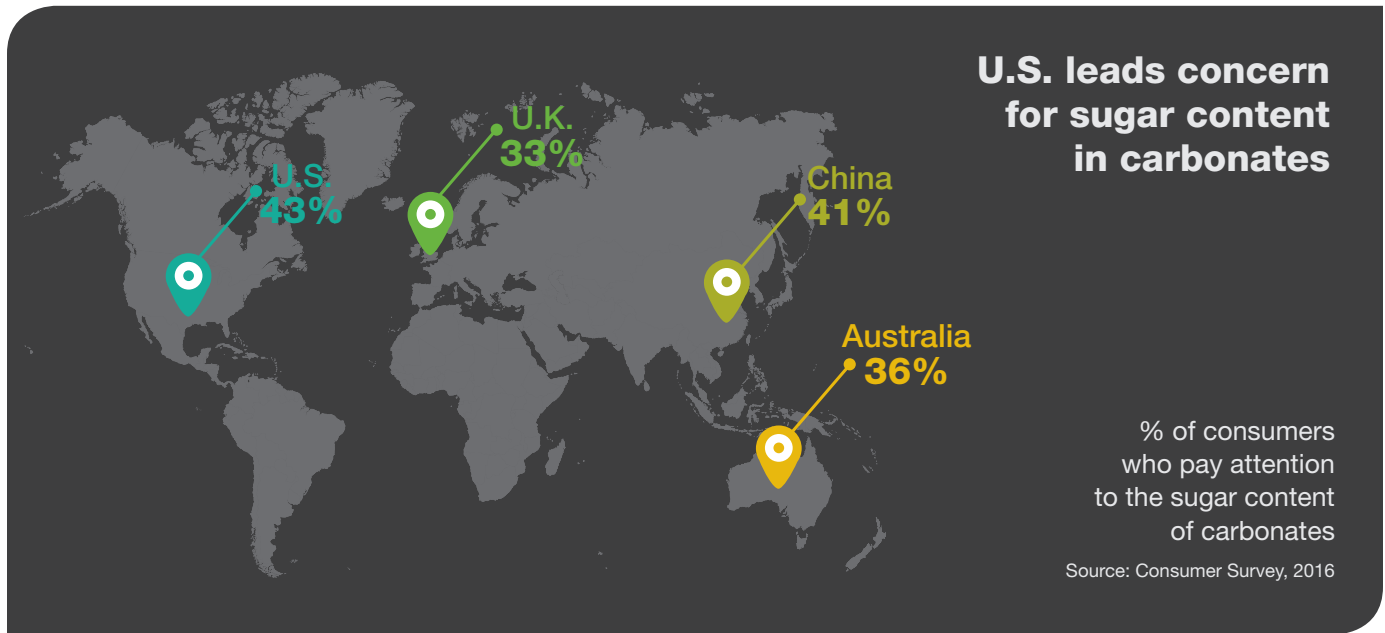
Consumers are tempering their love for sugary foods in response to global recommendations to limit calories from added sugars.¹ In fact, a recent study found that 76% of respondents said they were trying to limit or avoid sugars in general.² Many factors contribute to this shift in behavior. One such factor is healthcare messaging linking excessive sugar consumption, poor eating habits, and a sedentary lifestyle to obesity and other health concerns.³ It has sparked a focus on healthier lifestyles and “clean” eating.

Government agencies and lawmakers have also enacted laws targeting sugar. In the United States, new federal regulations require added sugars to be included on the Nutrition Facts Labels. Also some cities, states and countries are now imposing a tax on high-sugar products like soft drinks.

While the United States is leading the way, concern about added sugar in foods and beverages is a growing global issue.⁴

Changing regulatory landscape

The increased focus on sugar consumption in relation to weight management is leading to new regulatory guidelines in numerous markets around the world:



FDA has proposed an extension of the compliance dates for changes to labeling added sugars and dietary fiber to provide more time for manufacturers to review FDA guidance on the rules once finalized and implement them.⁵ Implementation of the changes to the Nutrition Facts Label may be delayed until January 2020 (for large companies) and January 2021 (for smaller companies).

CURRENT LABEL

| Nutrition Facts | | | |
|--------------------------------|-------|----------------------|------------|
| Serving Size 2/3 cup (55g) | | | |
| Servings Per Container About 8 | | | |
| Amount Per Serving | | | |
| Calories 230 | | Calories from Fat 72 | |
| | | % Daily Value* | |
| Total Fat | 8g | | 12% |
| Saturated Fat 1g | | | 5% |
| Trans Fat 0g | | | |
| Cholesterol | 0mg | | 0% |
| Sodium | 150mg | | 7% |
| Total Carbohydrate | 37g | | 12% |
| Dietary Fiber 4g | | | 16% |
| Sugars 1g | | | |
| Protein | 3g | | |
| Vitamin A | | | 10% |
| Vitamin C | | | 0% |
| Calcium | | | 20% |
| Iron | | | 5% |

* Percent Daily Values are based on a 2,000 calorie diet. Your daily value may be higher or lower depending on your caloric needs.

| | Calories | 2,000 | 2,500 |
|--------------------|-----------|---------|---------|
| Total Fat | Less than | 45g | 80g |
| Sat Fat | Less than | 20g | 35g |
| Cholesterol | Less than | 300mg | 300mg |
| Sodium | Less than | 2,400mg | 2,400mg |
| Total Carbohydrate | | 300g | 375g |
| Dietary Fiber | | 25g | 30g |

NEW LABEL

| Nutrition Facts | |
|---------------------------|----------------------|
| 8 servings per container | |
| Serving size | 2/3 cup (55g) |
| Amount per serving | |
| Calories | 230 |
| % Daily Value* | |
| Total Fat 8g | 10% |
| Saturated Fat 1g | 5% |
| Trans Fat 0g | |
| Cholesterol 0mg | 0% |
| Sodium 160mg | 7% |
| Total Carbs 37g | 13% |
| Dietary Fiber 4g | 14% |
| Total Sugars 12g | |
| Includes 10g Added Sugars | 20% |
| Protein 3g | |
| Vitamin D 2mcg | 10% |
| Calcium 260mg | 20% |
| Iron 8mg | 45% |
| Potassium 235mg | 6% |

*The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

Serving sizes will be more realistic to reflect how much people typically eat or drink at one time (sugar and calorie numbers may increase on the label)

Calories will be shown in a larger size

Daily value %s have been updated and will be listed more prominently

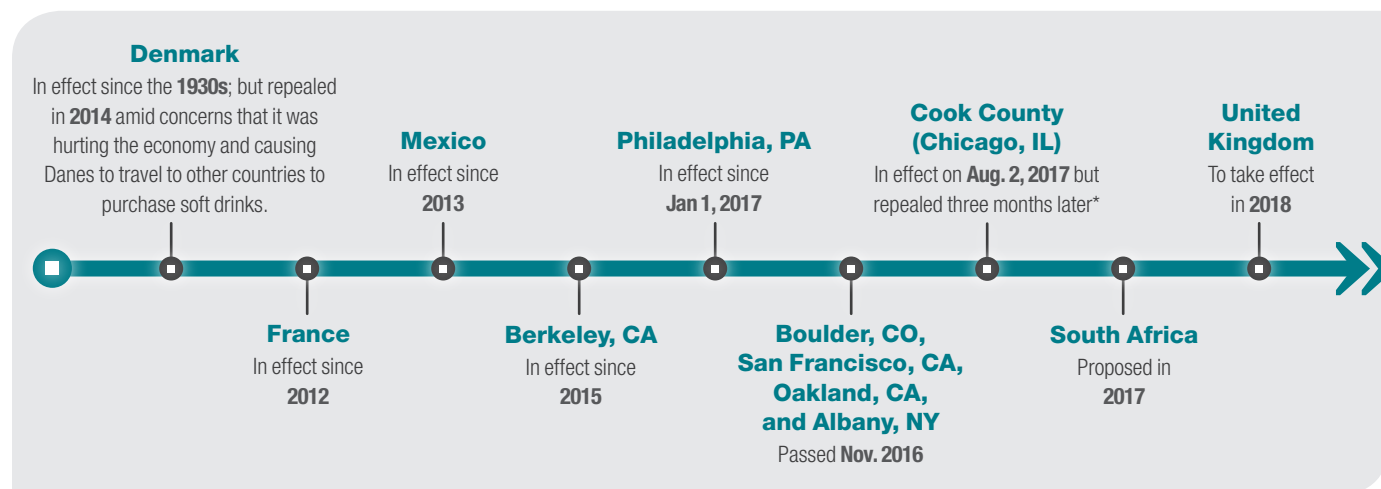
Added sugars will be called out separately

A daily value of 50 grams will be used to calculate the % for Added Sugars line

Taxes on sugary beverages gain momentum around the world

Experts are mixed as to whether sugar taxes are a good idea.^{6,7,8}

One reason is that the link between sugary beverages and obesity is not conclusive, as many other factors may play a role in causing a person to gain weight. Detractors also debunk the taxes as being imposed in order to provide a revenue source, rather than a legitimate effort to reduce sugar consumption. Nevertheless, while research continues to examine the impacts of sugar intake on long-term health, it is likely these taxes will continue to gain ground.^{9,10,11,12}



Source: "The Short and Sweet on Taxing Soda," Institute on Taxation and Economic Policy. <https://itep.org/wp-content/uploads/sodatax102816.pdf>

*Chicago's Cook County Board Rolls Back Tax on Sweetened Drinks. *The Wall Street Journal*, Oct. 10, 2017.

The sugar and health connection

Current scientific findings and the regulatory spotlight are bolstering existing consumer perceptions that sugar is bad for health. Weight gain is the most cited health issue attributed to excess sugar consumption by consumers,¹³ but other factors such as concern about diabetes and a general feeling that less sugar is healthier and better for kids are also of importance to consumers. Some of these issues gain relevance for consumers as they are directly affected by personal health concerns like diabetes or as they start a family. According to findings from Cargill's 2017 proprietary research on the "clean label" trend and consumer perceptions, consumers focus on reducing sugar because of a general belief that it is healthier (36%), because they are trying to lose weight (19%) and those with kids in the household say they don't want their children to have too much sugar (23%).¹⁵



The impact on products

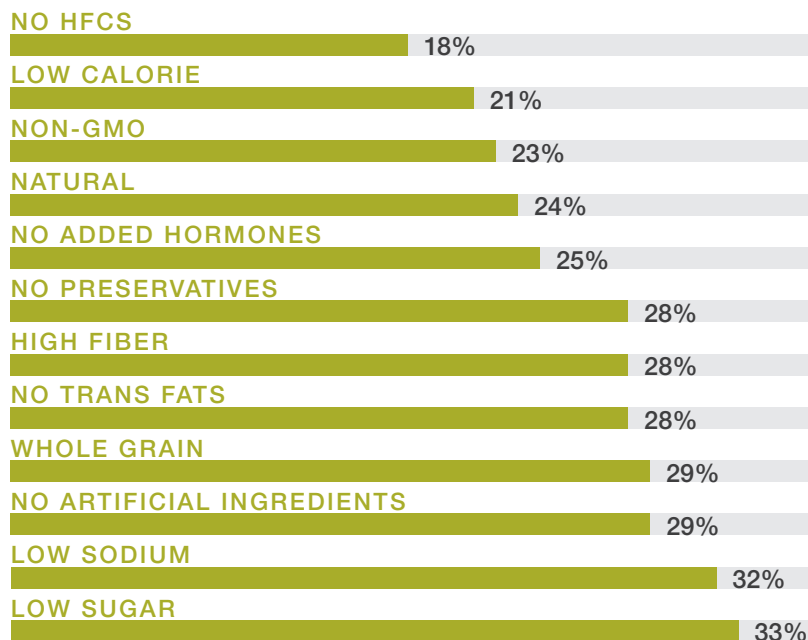
To say that these trends are having an impact on brands and product purchases may be an understatement. Research continues to show that sugar reduction is among the top product claims sought after by consumers. The drive to reduce sugar in their diet is prompting consumers to take a variety of actions:



*IFIC Food and Health Survey, 2017

That said, many consumers also have a mixed opinion about low- and no-calorie sweeteners, although 63 percent of consumers now believe that these sweeteners help them reduce their consumption of sugar.*

Low sugar tops the product claims shoppers are looking for



Source: FMI US Grocery Shopper Trends, 2017



Sugar avoidance is on the rise

Unprecedented numbers of consumers say they are looking to reduce their sugar intake or avoid it altogether.¹³

For the past two years, sugar has been the top ingredient that consumers are seeking to limit or avoid in their diet, and the numbers continue to rise.

Source: Cargill's IngredientTracker™



66% of U.S. shoppers were trying to cut back on or avoid sugar

Source: NPD, Nov. 2015



76% said they are trying to avoid or limit their sugar intake

Source: 2017 IFIC Food and Health Survey

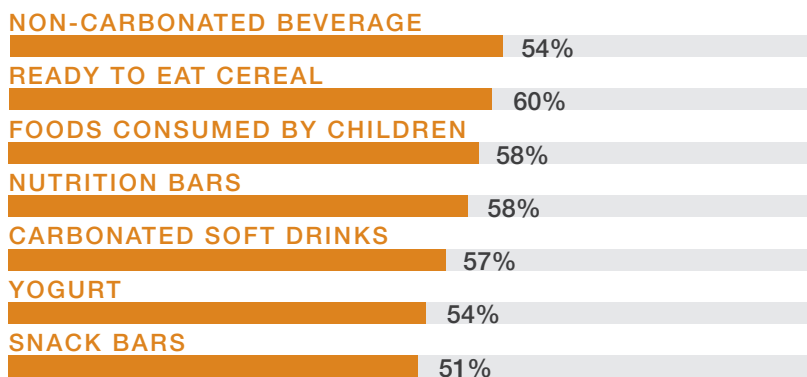


A perfect storm for **formulators**

As the debate about sugar takes center stage, companies are scrambling to reformulate existing products and/or introduce new low-sugar or no-sugar-added options. Though there are increasing numbers of new ingredients available, the lingering question for formulators is: “what ingredient should I use?” There is no clear answer, because there is no one-size-fits-all solution. Formulators have relied on sugar for a variety of functions, from taste and texture to mouthfeel and viscosity. That is a tall order for any single ingredient. Plus, what works well in a cake might not be best for a dairy product.

Furthermore, when it comes to sugar reduction in products, certain food categories seem to be more important than others. For example, consumers are less worried about sugar content in indulgent products like candy, but categories such as soft drinks and foods for children are on the front lines of sugar scrutiny. This is likely higher among parents, with 73% of consumers who say they have children in the household noting they pay attention to sugar in foods for kids.¹⁵

Consumers are paying attention to sugar in ...



Source: Transparency and Simplicity: The New Normal in Product Development Proprietary Research, 2017



Who is the **consumer** for sugar reduction products?

Sugar reduction is of growing concern for consumers across many different demographic groups. Here are a few insights into what is important for them:

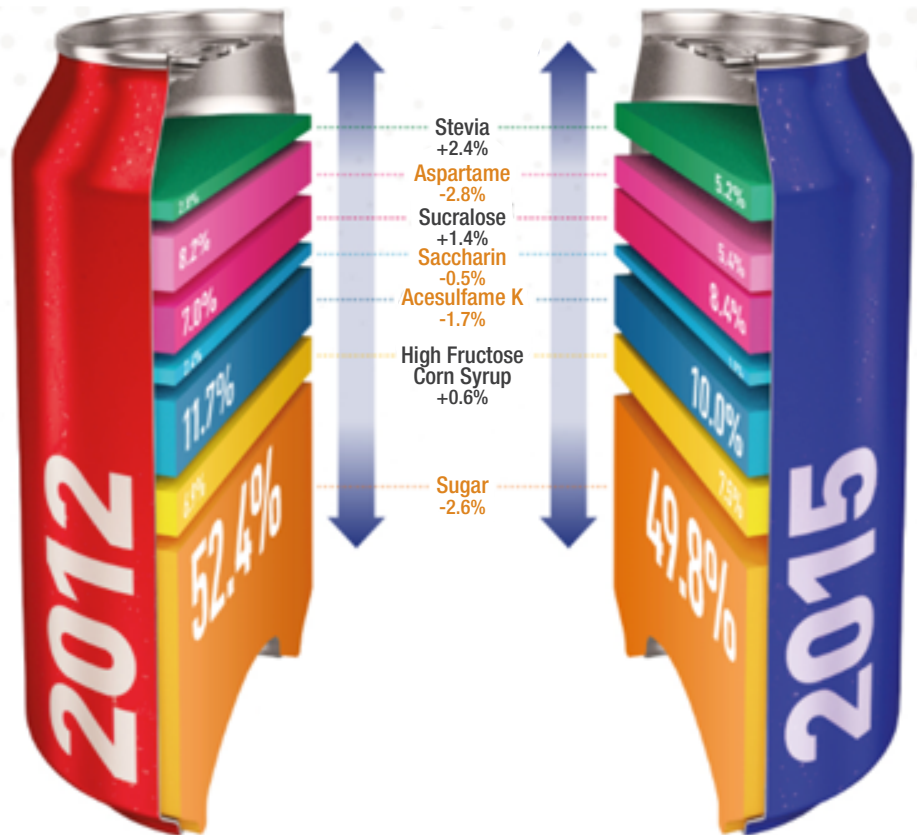
- Close to half of women say they are looking to reduce their sugar intake.¹⁴
- Millennials, just starting their families, express growing concern about sugar content, especially in products geared toward children.¹⁵
- Baby Boomers are reaching that age when they are starting to feel the effects of a poor diet and are motivated to make improvements that will maintain good health as they age.
- Eight in ten say they are taking more responsibility for their health as compared to ten years ago.¹⁶
- Six in ten consumers view sugar negatively, but they still largely prefer the taste of sugar to artificial sweeteners.¹³
- Overall, healthy eating is important to all of these consumers who are seeking sugar reduction, but weight management is likely a top motivator.¹³

Anatomy of a category: Soft drinks in the hot seat

Soft drinks have been at the center of debate about sugar content from the start.¹⁷ But as a result, the category is well ahead of the curve with respect to reduced-sugar product formulation. According to data from a 2015 Innova Market Insights Survey, sugar content influences a majority of consumers' decisions to purchase a soft drink: Sixteen percent of product launches for the 12 months ending March 2016 used a claim of no-added-sugar, low sugar or sugar-free.¹⁸

The attention on soft drinks helped to propel development and interest in high-intensity sweeteners from the stevia plant with both large and small consumer brands. As of 2015, stevia was also being picked up in other beverage categories, such as juice drinks and flavored waters. According to Innova, 25% of global beverage product launches include stevia-based sweeteners, making it the most used alternative sweetener in the category. Next-generation products are utilizing blends of stevia extracts and erythritol, which can provide a closer match to consumer taste expectations in these product formulations.

Global soft drinks (2012 vs 2015) that include:



Penetration of sweeteners in soft drinks category (Global, 2012 vs. 2015)

Innova Market Insights 2015

Does the sugar content of soft drinks influence consumer purchasing decision?

2016 Answer: Yes



Innova Market Insights 2015



Claims and label insights

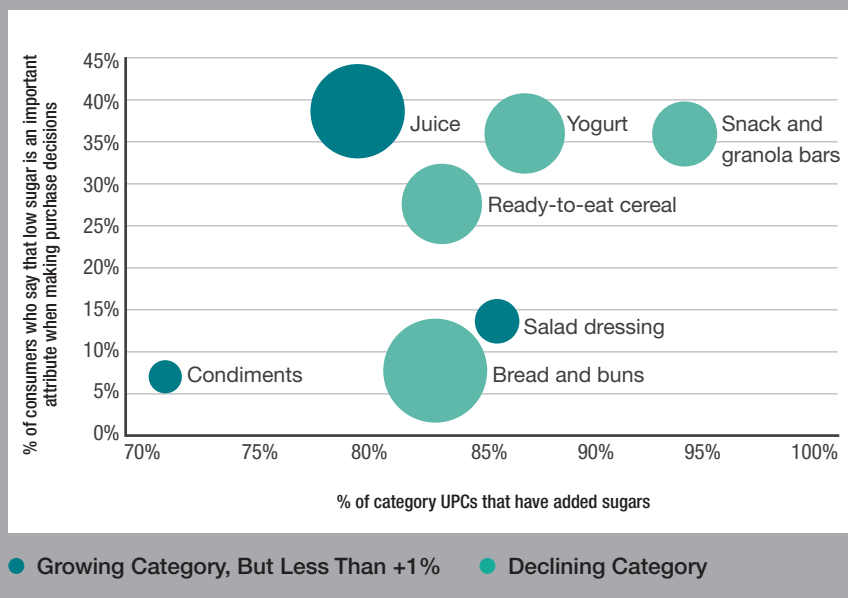
FDA is updating the Nutrition Facts label for packaged foods to help consumers make healthy, more informed decisions when buying products. The new label will increase the focus on serving sizes, calorie counts and will include a new line for added sugars. Although the mandatory implementation date of the new label is likely to be postponed until January 2020,⁵ some manufacturers are already making a proactive effort to adopt the new format. The following product categories are likely to be impacted.¹⁹

Finding a solutions provider

- Brands that are successfully reformulating rely on suppliers with expertise in the sugar reduction space.
- Look for a supplier with deep experience in sugar-reduction product development and a broad portfolio of sugar-reduction solutions.
- Partner with a supplier with application expertise—a long history and experience with top-tier technical service and applications.

The influence of sugar on purchase decisions

Categories with sugar could be affected by label changes



Source: Nielsen/Label Insights Transparency ROI Study, 2016

As a result, ingredient suppliers are rising to the challenge with innovations in sweetener technologies that are raising the bar and producing products that are not only lower in sugar and calories, but also taste great.

If you reformulate ...

Overall, consumers are becoming more educated about nutrition and health, but they are still misinformed about alternative sweeteners and they likely do not know the breadth of new natural sweetener ingredients for sugar reduction, so there remains a key educational opportunity.

What consumers say they want and what they actually purchase are

not always in sync. So, experts now advise that brands should approach sugar reduction with many factors in mind, such as a deep understanding of what their consumers are looking for in their particular product. Once a brand decides to provide a low- or no-sugar option, the manufacturer should work to meet taste expectations while using ingredients that offer a simple, label-friendly appeal. It is best to be as clear and transparent as possible about

your sugar reduction efforts (what ingredients you are using and why), so that consumers will understand the reasoning behind the ingredient changes. Ultimately, they will likely thank you for it with ongoing trust and repeat purchases.

To learn more about Cargill's growing portfolio of sugar reduction ingredients please visit Cargill.com/sugarreduction.

*FDA does not define natural.

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