SOLVING FOR SWEETNESS:

New insights for reduced-sugar products

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Evolving consumer attitudes about food ingredients and processing now mean that food manufacturers have to be increasingly nimble to stay on top of what consumers want and why they want it. And no other ingredient has faced more scrutiny or backlash than sugar. Product developers must now consider many variables, ranging from labeling requirements to ingredient sourcing, as well as wildly differing opinions about alternative sweeteners.

These days, *everybody* has an opinion about sugar. According to a 2018 study, "Navigating the World of Sweeteners" from HealthFocus International, 95% of global shoppers believe that reducing sugar makes foods seem at a least somewhat healthier – and more than half believe it makes them seem a lot healthier.

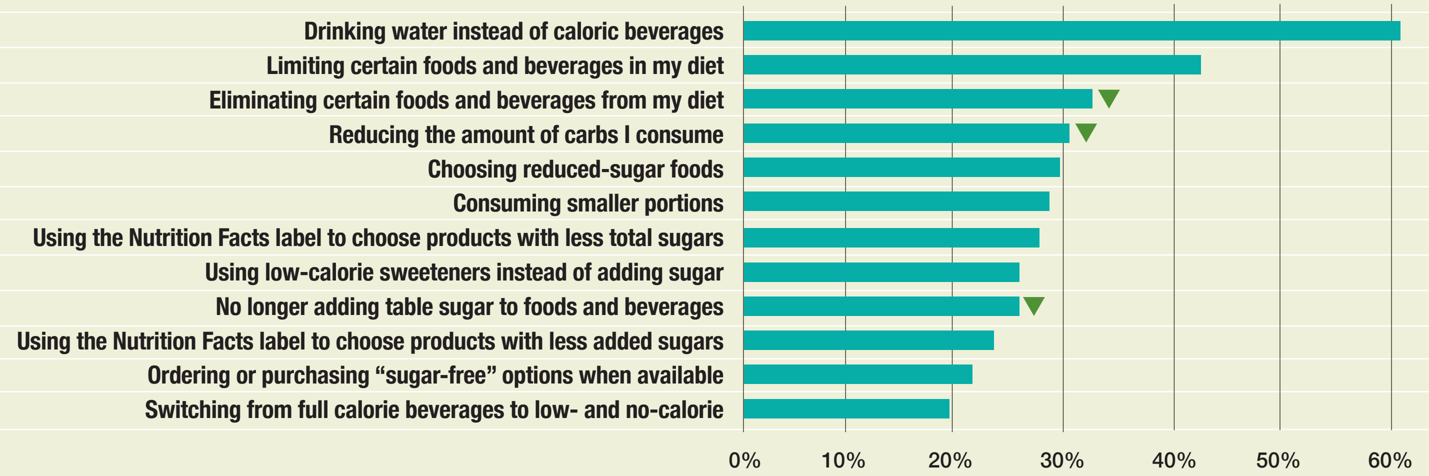
So addressing sugar content in products is now critical to their health credentials. But from there, consumer attitudes often vary. While more than half say reducing sugar has become more important in their diets in the last year, when it comes down to cutting back on sugar, a majority simply want to reduce the amount of sugar in their diets.[1] In general, they prefer products that are less sweet or unsweet, as opposed to replacing sugar altogether.

Attitudes about sugar are decidedly complex, but how these perceptions affect consumer product choice is even more difficult to understand. According to the 2020 New Nutrition Business (NNB) report, "Ten Key Trends in Food, Nutrition and Health," consumers can be accepting of sugar in certain circumstances. For example, the report states, they are often forgiving of high-sugar brands that offer "honest indulgence," but they tend to be much more demanding of products and categories that are positioned as healthful, such as fruit juices, cereals and yogurt. In today's market, wrote Julian Mellentin, author of the report, "to be credible in any kind of health message, products in these categories need to be lower in sugar, whatever the other claimed benefits might be."

In the United States, about three in four consumers are limiting or avoiding sugar in their diets, according the 2020 Food and Health Survey from the International Food Information Council (IFIC). American consumers are taking a number of actions to avoid sugar, the most common of which is to drink water instead of caloric beverages, but nearly one in five take a number of other actions:

Actions taken to limit/avoid sugars

(Of those limiting/avoiding sugars)



Source: IFIC 2020 Food and Health Survey.

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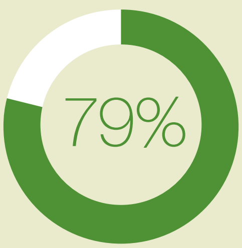
Motivations behind sugar reduction also vary. All-out sugar avoidance tends to be most common among women who believe that reducing their intake helps them lose/maintain weight or reduce carb intake, while men and single consumers are still more likely to use sugar.[2]

New labeling requirements for sugar products, although they vary around the world, are also having a big impact on how consumers evaluate products. In the United States, the new nutritional panel requires manufacturers to list grams of added sugar on the label, in addition to total grams of sugar.[3] This new labeling is helping to inform consumers about where the sugar in their diets is coming from, and four in ten consumers now call both listings equally important when considering product labels.

Still, growing numbers of sugar-concerned consumers are prompting interest in low- and no-calorie sweeteners, with about one in three U.S. consumers saying they use these products. So potentially, consumer preference for sweetness in foods is changing.



According to the IFIC study, among those consumers who don't use sugar or low-/no-calorie sweeteners, 79% now also indicate that that they don't need to add sweetness to their food and beverage products.[4]

The demand for natural ingredients is another factor. According to data from the NPD Group presented at the International Sweetener Colloquium in February of 2020, as consumers seek to consume less sugar, they occasionally turn back toward sugar itself (or opt for natural sugars and sweeteners), while staying away from artificial sweeteners.[5]

Touting a natural sugar ingredient has become a key strategy in marketing reduced-sugar products, according to the Ten Key Trends report. But what defines a "natural sugar" is in the eye of the beholder, according to Mellentin, who noted that this is a very fragmented – and potentially confusing – consumer segment.

While some consumers believe that these sugars come from honey or dates, others are open to products that contain zero-calorie sweeteners from sources like stevia and erythritol. However, he wrote, their decision to choose one product over another may depend on how indulgent it is. The brand's "coolness" factor, the product's consumption occasion or whether the consumer is motivated by the number of grams of sugar per serving can all play a role.

A multi-pronged approach

Clearly, addressing sugar reduction is a top dietary trend and in-line with dietary recommendations. But making sense of these changing consumer preferences is a difficult task for product formulators, not to mention the fact that taking sugar out of a product and replacing it with alternative ingredients is tricky business.

Sugar has been an all-purpose ingredient in product formulation. It contributes sweetness, mouthfeel, structure, texture and shelf life, so it cannot often be replaced by a single alternative ingredient. Consumers are now clear that they don't like artificial sweeteners like sucralose or aspartame, which consistently elicit negative consumer health perceptions and purchase impact in Cargill's IngredienTracker data, but shoppers are becoming increasingly accepting of alternative sweeteners they perceive as being natural.

The good news is that there are now plenty of these low/no-calorie ingredient solutions. The most well-known these days is likely stevia-based sweeteners, named for the stevia plant native to Latin America, with some of the newest stevia sweeteners made using a fermentation process to create the sweetest components of the stevia leaf in a more sustainable way.

Product formulators have learned that it is best to replace sugar with a combination of ingredients and strategies designed to address the variety of challenges created by reducing or eliminating sugar. For example, when stevia is used at high levels, it sometimes provides diminishing returns. So companies are combining these high-intensity sweeteners with a bulk sweetener such as erythritol, a sugar alcohol, to displace sugar and calories while balancing the sweetness profile.

Suppliers have also conducted extensive research on the stevia plant to create next-generation extracts that address some of these challenges. For example, Cargill worked for more than 10 years to create the precision sweetness of ViaTech® stevia leaf extracts and develop a portfolio of leaf-based sweeteners from the best components of the plant, Rebaudiosides (Reb) M and D. But because Reb M and Reb D are limited in the plant, Cargill also had to create a sustainable method to produce the components at commercial levels, using fermentation and a specially crafted yeast. EverSweet™ combines these molecules at just the right ratio for optimal sweetness at up to 100% sugar reduction with minimal bitterness or aftertaste, as compared to first-generation stevia ingredients from Reb A.

For some consumers, sugar reduction alone may not be enough. Because reduced-sugar products have become so ubiquitous, this claim is no longer a significant point of differentiation in many product categories.[6] Here, other ingredients like inulin from chicory root fiber can be a great asset by providing additional health benefits. This multi-purpose ingredient can substitute for sugar by replacing its mouthfeel, texture and flavor and serve as a masking or bulking agent, as well as a fat mimetic. And since inulin is a well-studied prebiotic dietary fiber, it can also enhance the digestive health properties in a product.[7]

Regardless of ingredient or strategy, a key tenet is to not sacrifice flavor in reduced-sugar products. Good taste is still an important attribute for the majority of consumers – even in lower-sugar products. Getting the taste and texture right is critical. However, if reducing sugar doesn't work, an honest approach to sugar is another option.[8] In certain products, consumers might be ok with some sugar if the product is designed to be an afternoon pick-me-up or an energy booster. Others may also accept sugar in products to reward themselves with an occasional sweet treat that tastes great.

The point is that consumers are striving to understand how much sugar they're eating and make their product decisions accordingly. They now have a growing expectation for brands to be completely honest about sugar content in their products, and they are particularly exacting about products that claim to be healthful.[9] So, whether brands are producing products to be lower in sugar or an indulgent treat, they will have to be increasingly transparent about their sugar reduction choices to be successful in the space.

[1] HealthFocus International. 2018 Sweetener Report. "Navigating the World of Sweeteners."

[2] International Food Information Council (IFIC). 2020 Food and Health Survey. https://foodinsight.org/2020-food-and-health-survey/

[3] U.S. Food and Drug Administration. "Added Sugars on the New Nutrition Facts Label." FDA.gov. https://www.fda.gov/food/new-nutrition-facts-label/added-sugars-new-nutrition-facts-label

[4] Ibid. IFIC.

[5] Sterk, R. "Craving, Indulgence Drive Consumption Even as Consumers Seek to Avoid Sugar." February 26, 2020. Food Business News. https://www.foodbusinessnews.net/articles/15500-craving-indulgence-drive-consumption-even-as-consumers-seek-to-avoid-sugar

[6] Mellentin, J. "Ten Key Trends in Food, Nutrition and Health 2020." New Nutrition Business. https://www.new-nutrition.com/

[7] Wilson, B; Whelan, K. "Prebiotic Inulin-Type Fructans and Galacto-Oliggosaccharides: Definition, Specificity, Function and Application in Gastrointestinal Disorders," *Journal of Gastroenterology and Hepatology.* 2017 Mar:32 Suppl 1:64-68. Doi:10.1111/jgh.13700.

[8] Ibid. *NNB.*

[9] Ibid.

Claims: *The labeling, substantiation and decision making of all claims for your products is your responsibility. We recommend you consult regulatory and legal advisors familiar with all applicable laws, rules and regulations prior to making labeling and claims decisions.*

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