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EXECUTIVE DIRECTOR

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(English only)**

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Various Sugar Related Articles

The Executive Director would like to bring your attention to the various relevant articles below which are of high relevance.

The Search for Sugar Substitutes

As traditional sweeteners come under attack, food companies are in hot pursuit of alternatives

Annie Gasparro Oct. 15, 2017

Companies and researchers are racing to find new ways to make foods sweet without putting people's health at risk. Illustration: John Kuczala For The Wall Street Journal

Food makers are racing to find acceptable alternatives to sugar. But it's hard to replace a taste that so many Americans have grown to love.

Traditional sweeteners from sucrose, or table sugar, to high-fructose corn syrup are an increasing concern to consumers and lawmakers, who see them as a key culprit in America's obesity and diabetes epidemic.

Now researchers at food giants, startups and universities are looking for new ways to make foods sweet without putting people's health at risk. Some are testing out natural zero-calorie ingredients like monkfruit and South American root extracts that are so intensely sweet that they can add flavor without calories. Others are manipulating granules of sugar to make them taste sweeter. They're also developing new ingredients that will block bitter taste receptors and make food seem like it has more sugar than it does.

JOURNAL REPORT

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Nestlé SA scientist Olivier Roger, who's leading the food titan's sugar-reduction effort globally, says many companies are working on finding answers. Adding to the urgency: Some companies, like Nestlé, have self-imposed deadlines for lowering sugar content in food. But there are big challenges to removing what has been a key ingredient in processed food for over a century.

For one thing, there are side effects to removing sugar: It not only adds sweetness but also functions as a preservative and adds texture, as well as contributing to the overall volume of food. Whole recipes have to be rethought when it is removed. And after finding an alternative, companies may face higher costs, supply constraints or regulatory hurdles related to the substitute ingredients.

JOURNAL REPORTS: HEALTH CARE

It's very difficult, very complex. We still don't have the magic solution that would replace sugar, Mr. Roger says.

The push comes amid a widespread effort to put the brakes on sugar consumption. In a survey released by market-research firm Nielsen earlier this year, 22% of respondents said they already restrict their sugar intake. Most major food makers, including Mars Inc., General Mills Inc. and Kellogg Co., have pledged to reduce sugar in candy, children's cereals and other products.

Last year, the federal government called out sugar consumption as a problem in the U.S. Dietary Guidelines, recommending for the first time that people consume no more than 10% of their daily calories from added, or refined, sugars. Americans currently average 13% of their calories from added sugar, the report says.

Souring on Sugar

As more U.S. consumers snub sugar and artificial sweeteners, natural alternatives gain ground

22% Americans who restrict their sugar intake

52% Americans who avoid artificial sweeteners like aspartame

22,000 Food products containing high-fructose corn syrup

206 Variations on how high-fructose corn syrup can be listed on labels

19% Increase in 2016 sales of products with natural/low-glycemic sweeteners

Source: Label Insight, Nielsen, THE WALL STREET JOURNAL.

Regulators also said last year that food and beverage makers will be required to disclose on nutrition labels how much sugar has been added to products, as a distinct item within the total sugar content. The FDA recently extended the deadline for the new labels to Jan. 1, 2020 from July 2018.

Cutting the amount of sugar will be a steep task. More than 22,000 products in the U.S. contain high-fructose corn syrup, according to food labels cataloged by Nielsen and Label Insight, a provider of food-label data. Even foods widely seen as healthy contain added sugars. For instance, among yogurt products, 86% contain added sugars of some kind, as do 79% of shelf-stable juices and drinks.

Years ago, when consumers were trying to cut calories in general, artificial sweeteners such as aspartame (Equal) and later sucralose (Splenda) gained popularity, and scientists thought they had cracked the code. Now those products have come under scrutiny by consumer advocates over health concerns. While there is still a debate among the scientific community, the Center for Science in the Public Interest, CSPI, warns that artificial sweeteners may post a slight risk of cancer. More than half of Americans surveyed by Nielsen said they avoid those artificial sweeteners.

One avenue researchers are exploring is altering sugar itself. Nestlé, which adds sugar to chocolate bars, ice cream and less-obvious products like frozen dinners, says it has discovered a way to make sugar particles dissolve faster when people eat them. That allows people to taste the sugar immediately so that the product seems sweeter, allowing the company to reduce sugar content by up to 40%.

Hershey, meanwhile, says it has patented technologies that boost sweetness by altering the surface area and shape of sugar particles in chocolate. It wouldn't provide details of how

shape impacts taste, but some scientists say that when there's more surface area to touch the tongue's taste receptors, a food can seem as sweet with less sugar.

DouxMatok, an Israel-based food-tech company, says it has patented technology that intensifies the sweetness of sugar by attaching sugar molecules to what it calls a carrier that targets certain taste buds and makes the sweetness linger. That can reduce the sugar content in food by up to 40%, depending on the product, the company says.

More than sweetness

Even if scientists find a way to reduce sugar, that isn't the end of the problem. For one thing, if you take out sugar, you end up with a product that isn't, well, as big as it used to be.

The high-tech sugar Hershey has developed allows the company to use less, but it needs to add something to make up the volume, or its chocolate bars would shrink. Replacing sugar with more of the other ingredients such as milk or cocoa butter can add fat, and that's viewed as a negative.

If you take out 30 grams of sugar, you have to put in 30 grams of something else, and it also has to be healthy, says DouxMatok Chief Technology Officer Alejandro Marabi. Every category has different challenges. Chefs and food scientists every day will have recipes they try and test, he says.

Sugar also serves a lot of functions in food beyond making it sweet, and they aren't easy to replicate. "What many people may not realize is that sugar plays several roles in chocolate", like affecting the texture, a Hershey spokesman says.

For instance, Nestlé's Mr. Roger says, "if you remove sugar from ice cream, you have an ice cream that is very, very hard."

Adding fiber, however, can soften it. "You have to have a combination of different ingredients to overcome different gaps that we have when we reduce sugar," he says.

Sugar also acts as a preservative because it binds with water, not allowing bacteria to grow. Removing it from bread can enable mold to grow faster.

Looking to nature

Some researchers now say natural, high-intensity sweeteners that come without calories are the future of sweetness. But current alternatives such as stevia and monkfruit can have a bitter aftertaste.

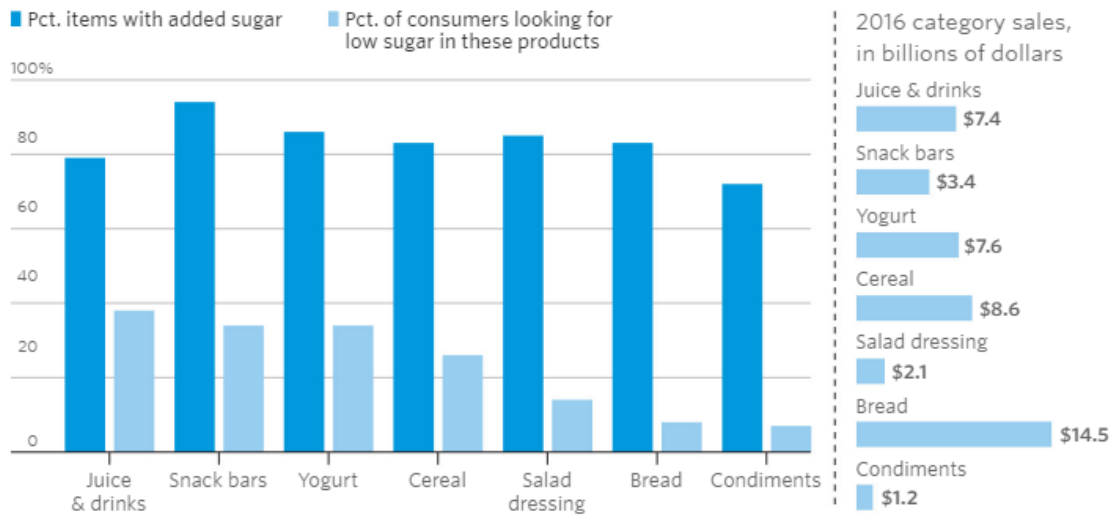
Researchers around the world are testing ingredients derived from mushrooms that block bitterness. They can be added to coffee drinks and dark chocolate to reduce the amount of sugar. Or they can offset the unwanted aftertaste of those natural zero-calorie sweeteners.

How Sweet It Is

Added sugar is the norm in many food categories, sparking a hunt by consumers for healthier options:

How Sweet It Is

Added sugar is the norm in many food categories, sparking a hunt by consumers for healthier options



Source: Label Insight, Nielsen

But even when they find the right combination of ingredients, it can be difficult to source them. One all-natural sweetener that has recently become a popular candidate for tests is a syrup from yacon, a South American root that is relatively hard to find in the U.S. Even if it works great, it's currently too expensive, one food-company scientist says.

Some companies are finding solutions closer to home. Ahold Delhaize NV, a European grocer with nearly 2,000 stores in the U.S., says it removed 500,000 pounds of sugar from its own brands in 2015 and 2016. For its juices, food scientists found sweeter varieties of apples and other fruits, says Jacqueline Ross, director of product development for Ahold USA. "It's important to take out [added sugar], but also to not replace it with something else that may not be liked, like artificial sweeteners," she says.

Allison Fickett, a dietitian and regulatory manager at Daymon Worldwide, a grocery consultancy, says some of the company's clients are reducing added sugar in products that contain fruit by picking it when it's riper and cooking it a bit longer to enhance caramelization. That method "doesn't require reformulating or investing in new food technology," she says.

Eve Crampon, senior product developer at Stonyfield yogurt, says she and her team have worked for more than two years to reduce the sugar in its yogurt. They screened the thousands of strains of bacteria cultures until they found the right combination that produced a less tart yogurt and thus required less added sugar. "Finding the right strain that would be mild without posing other challenges took a while. We had to test a lot of strains," she says.

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ECRUU Sugar News Monitor - 19 October 2017

FRANCE - Sugar tax rates increased 2-3 times

French MPs voted in favour of increasing the tax based on sugar content to tackle obesity in the country. According to the amendment, there is no tax on drinks with less than 5mg/100ml of sugar, same tax for 5mg/100ml, twice the present tax for drinks with more than 8mg/100 of sugar and three times the current rate for drinks with more than 10mg/100ml sugar. ([France TV](#))

Les députés votent une nouvelle version de la "taxe soda"

Cet impôt vise à lutter contre l'obésité et sera appliqué sur les sodas en fonction de leur taux de sucre.



Les députés ont voté dans la nuit de mardi à mercredi 18 octobre une modulation de la "taxe soda" en fonction du taux de sucre, pour mieux lutter contre l'obésité. (MAXPPP). Franceinfo avec AFPFrance Télévisions

Les députés ont voté dans la nuit de mardi à mercredi 18 octobre, une modulation de la ["taxe soda"](#) en fonction du taux de sucre, pour mieux lutter contre l'obésité. Ce vote a eu lieu lors de l'examen en commission du projet de budget de la Sécurité sociale.

La commission des Affaires sociales a adopté un amendement en ce sens au projet de loi de financement de la Sécurité sociale pour 2018, présenté par le rapporteur général Olivier Véran (LREM, ex-PS).

Vers un "lissage" des seuils

L'ensemble des boissons contenant une quantité - même minime - de sucres ajoutés sont taxées depuis 2013. Après l'adoption de cet amendement, elles seront taxées au même niveau qu'aujourd'hui à partir de 5 grammes de sucre pour 100 millilitres, deux fois plus qu'aujourd'hui au-dessus de 8 grammes et trois fois plus au-dessus de 10 grammes. Par ailleurs, elles ne seront plus taxées en dessous de 5 grammes pour 100 millilitres.

"*Ne va-t-on pas trop vite et trop loin ?*", a questionné Jean-Pierre Door (LR). Le rapporteur a indiqué qu'il travaillait sur un "*lissage*" des seuils pour la séance dans l'Hémicycle la semaine prochaine.

Le groupe LR a rappelé que la ministre de la Santé, Agnès Buzyn, avait émis lors de son audition des réserves sur le dispositif, préférant "*l'éducation à la santé*" plutôt que de "*taxer les personnes les plus pauvres*", plus consommatrices de boissons sucrées.

Sugaronline Ebriefing - 20/10/2017

US: New study shows taxes reduce sugar intake

Taxing sugar in a range of foods would have a greater impact in reducing sugar consumption and caloric intake than imposing similar taxes on specific products, like soft drinks, says a recent study published in the Journal of Health Economics, according to US News & World Report.

"The big takeaway is that consumers will respond to taxes but that the response will vary with the type of tax," says Matthew Harding, associate professor of economics and statistics at the University of California-Irvine and a co-author of the research. "In particular, (ingredient) taxes are more effective because they are targeting an (ingredient) across all products so it prevents people from substituting from a taxed product to an untaxed product, which may not necessarily improve the nutrition intake."

In the study, researchers compared both specific taxes on products - such as soda pop and packaged meals - and broad taxes on ingredients like sugar that's contained in different foods. The researchers did not distinguish between natural sugars, such as those found in fruit and milk, and added sugars, which are used to flavor cookies, cakes, fruit pies, some beverages and other products.

To study the effect of sugar taxes, the researchers conducted a simulation by using a statistical model based on 123 million food purchase transactions from U.S. grocery stores. The researchers estimated how consumers would respond to changes in the prices of hundreds of thousands of products grouped into about 30 categories, such as baked goods, fruits and vegetables and also how they would substitute between food categories when prices in one category change. This allowed the researchers to simulate the impact of different types of food taxes. The researchers also ran a model that exempted fruits and vegetables from the sugar tax and found similar results to the findings of the main study: Taxing sugar could have a significant impact on consumption.

"Our main finding is that (ingredient)-specific taxes have much larger effects on nutrition than do the product-specific taxes we study," the study says. A 20% tax on sugar reduces caloric intake by more than 18%, according to the research. Meanwhile, a 20% tax specifically on soda decreases caloric intake by about 5%. "Overall, our estimates suggest that the use of nutrient-specific taxes could have an important effect in inducing healthier purchasing behavior among consumers," the study concludes. The research paper notes that excessive consumption of added, non-natural sugars is linked to a host of negative health effects in the U.S. Those effects include obesity and a host of chronic health conditions such as arthritis, asthma, depression, diabetes, cardiovascular disease, high blood pressure and colorectal, kidney, breast and prostate cancer.

Harding and his study co-author, Michael Lovenheim, an associate professor in the department of policy analysis and management at Cornell University, say they are unaware of any local governments that impose an ingredient tax. In recent years, nine U.S. municipalities have adopted taxes on sugar-sweetened sodas or sodas and other beverages, such as non-calorically sweetened beverages that have artificial or natural non-caloric sweeteners, says Lynn Silver, senior adviser at the Public Health Institute in Oakland, California. Such beverages are one of the top sources of added sugars for U.S. residents, according to the Centers for Disease Control and Prevention. These drinks are enormously popular in the U.S.; from 2011 to 2014, 63% of youths and 49% of adults nationwide drank a sugar-sweetened beverage on any given day, according to the CDC.

One of the municipalities that has imposed taxes on the sale of sugary beverages is Berkeley, California. Effective March 1, 2015, the city began imposing a tax of one cent per ounce on sugar-sweetened beverages; the revenue raised by the tax funds children's health programs. After the tax took effect, sales of sugar-sweetened beverages dropped by about 10%, according to a 2017 study published in PLOS Medicine. There was no evidence that the tax decreased overall beverage sales for grocery stores, the study says. The research suggests that taxes on sugary beverages "may be effective in shifting consumers to healthier beverages without causing undue economic hardship and while raising revenue for social objectives," the study says.

Dramatic increases in the consumption of added sugar among U.S. residents have contributed to obesity rates, research suggests. In the late 1970s, the obesity rate in the country was more than 14.5%. It increased to more than 22% by the early 1990s, and today, more than two-thirds of U.S. residents - 36% - are obese, according to the study in the Journal of Health Economics. The uptick in obesity corresponds to an increase in sugar consumption in the U.S. during the past three decades. Since 1977, the amount of added sugars consumed by U.S. adults has increased by more than 30%, according to the Obesity Society.

Limiting your sugar intake can help ward off obesity, cardiovascular problems and other health issues, research suggests. The American Heart Association recommends that women and children over the age of 2 in the U.S. consume no more than 100 calories daily from added sugars, or about 6 teaspoons. Men in the U.S. should ideally have no more than 150 calories daily from added sugars, the equivalent of 9 teaspoons. Yet, the average American consumes more than 22 teaspoons of sugar daily, which translates to 355 calories.

Cutting down on consumption of added sugar means making better eating choices, since such sugar is common in many popular foods. "Consuming excess added sugar is too easy - cutting back permanently is one of the smartest gifts you can give yourself," says Lise Gloede, a registered dietitian based in Arlington, Virginia. "Added sugars are in lots of foods, and Americans as a whole still consume too much added sugars from sweetened beverages, baked goods, sweets, snack foods and desserts." These eating habits lead to weight gain, which in turn contributes to Type 2 diabetes, high blood pressure, high cholesterol, stroke, fatty liver disease and other conditions, she says. Cutting added sugar from your diet can have a dramatic positive effect on your weight and health, Gloede says.

John Edgell, a longtime congressional staffer who lives in the District of Columbia, learned the benefits of giving up sugar after his doctor advised him he needed to get his blood glucose level down. Edgell swapped out what had been his usual breakfast of two glasses of orange juice, toast with jelly, a banana and sometimes a bowl of Honey Nut Cheerios for a cup of plain yogurt, blueberries and an English muffin without jelly. Edgell, 56, dropped 10 pounds in two weeks, and by mid-October weighed the same as he did in college: less than 200 pounds. His blood glucose levels are much improved. "I was ignorant about food and nutrition," Edgell says.

Tweet

People against Sugar Tax **Against Sugar Tax** @AgainstSugarTax

After 10 years of bans, restrictions, and voluntary measures, it's time for health campaigners to admit their efforts have failed.

"There's been restrictions on 'junk food' advertising since 2007, many companies voluntarily don't promote sugary products, and yet childhood obesity isn't falling. This nanny-state approach has failed."

Brook Whelan
Chief Executive, People against Sugar Tax

People against Sugar Tax