Sugar Guidelines and Industry Pressure

Doesn't it seem like when it comes to nutrition, there are more opinions than [music] facts to go around? Every day we hear new theories about diets and supplements and >> [music] >> best foods to eat. Well, my role is to take the mystery out of good nutrition and look at the science. Welcome to the NutritionFacts Podcast. I'm your host, Dr. [music] Michael Greger. Public health authorities continue to drop the upper tolerable limit of daily [music] added sugar intake, and that's a good thing. Here's our first story. Dating back to the original dietary goals for the United [music] States in 1977, the so-called McGovern report, leading nutrition scientists were not only calling for a reduction in meat and other sources of saturated fat and cholesterol like dairy and eggs, but also sugar. The goal was to reduce America's sugar intake down to no more than 10% of the daily diet. The final conclusions would hang sugar, reported the president of the Sugar Association. The McGovern report has to be neutralized. Don't worry though, we have the National Cattlemen's Association on our side, and like big sugar, they appealed to the Senate Select Committee to withdraw the report. The sugar industry empire striking back appeared to work when the official dietary guidelines were released in 1980 and then again in '85, no specific limit like 10% just a vague avoid too much sugar, whatever that means. By '95 it got even vaguer, choose a diet moderate in sugars. In 2000, they were at least back to limit, but even that was too strong. Under pressure from sugar lobbyists, they went back to a moderate your intake of sugars before the 2005 guideline committee dropped the S word completely, encouraging Americans to choose carbohydrates wisely, whatever that means. If only there were some kind of dietary guidelines committee that could give us guidance. The Sugar Association expressed optimism about that 2005 committee. The Sugar Association Incorporated is committed to the protection and promotion of table sugar consumption, and they will not allow for the disparagement of sugar.

And they're not kidding. In 2003, the World Health Organization released a report on diet, nutrition, and the prevention of chronic disease, which for the first time since the McGovern report, called for reduction in sugar intake to under 10%. The Sugar Association responded by threatening to get the US to withdraw all funding from the WHO.

Here it is in black and white. The Sugar Association threatening to pressure Congress to withdraw funding from the World Health Organization. You know, polio vaccinations, AIDS medications, be damned. You just don't mess with the candy man. The threat was described as tantamount to blackmail and worse than any pressure they had experienced from big tobacco.

But now, 15 years later, and 40 years after the first proposed McGovern report, the current 2015 to 2020 dietary guidelines lay out as a key recommendation the 10% limit, currently exceeded by every age bracket in the United States starting at age one, with adolescents averaging 87 g of sugar a day, meaning the average teen is effectively eating 29 sugar packets a day. The Sugar Association describes the 10% limit as extremely low. I mean, only like up to a dozen spoonfuls a day.

But of course, there's no dietary requirement for added sugar at all, and every single calorie you get from added sugar is a wasted opportunity to get calories from sources that actually provide nutrition. To the American Heart Association's credit, they went further, trying to push added sugar intake down to about 6% of calories, for which a single can of soda could, you know, send you over the limit.

Sugar, Obesity, and Weight Gain

An added sugar limit exceeded by 90% of Americans. In 2017, the American Heart Association released their guidelines for children, recommending they get no more than about, you know, six teaspoons per day, which means there's, you know, nearly 100 cereals on the US market for which a single serving exceeded the entire recommended daily limit. And the Heart Association recommends no added sugars at all under age two. Small toddlers are to avoid added sugars altogether, a recommendation that's violated in up to 80% of toddlers. The US is one of at least 65 countries that have implemented dietary guidelines or policies to curb sugar consumption. In

the UK, the Scientific Advisory Committee on Nutrition made new recommendations to reduce added sugars down to 5%, which is the direction the World Health Organization is headed as well. They always seem to be kind of ahead of the curve. Why? Because their policy-making process is at least partially protected from industry influence. Unlike governments, which may have competing interests in commerce and trade, the World Health Organization is exclusively concerned with health.

In our next story, we look at the sugar industry's response to evidence implicating sweeteners in the obesity epidemic. The obesity epidemic may just be the tip of the iceberg in terms of excess body fat. It's been estimated that 91% of adults, nine out of 10 of us, and 69% of children in the United States are, quote unquote, over fat, defined as excess body fat sufficient to impair health.

That can occur even in normal weight individuals, often due to excess abdominal fat. The way you tell if you're over fat is if your waist circumference is more than half your height. What's causing this epidemic?

One primary cause may be all the added sugars we're eating. A century ago, sugar was heralded as one of the cheapest forms of calories in the diet. Just 10 cents worth of sugar could furnish thousands of calories. Harvard's sugar-pushing nutritionist bristled at the term empty calories. The calories in sugar were not empty, but full of energy. In other words, full of calories, which we are now getting too many of. The excess body weight of the US population corresponds to about a 350 to 500 calorie excess daily caloric intake on average. So, to revert the obesity epidemic, that's how many calories we have to reduce. Okay, so which calories should we cut?

That's just how many calories the majority of Americans who failed to meet the dietary guideline sugar limit get in added sugars every day, 25 teaspoons, about 400 calories. Even the most die-hard sugar defenders like James Rippe, who is reportedly paid $40,000 a month by the high-fructose corn syrup industry on top of the 10 million they paid for his research, even Dr. Rippe considers it indisputable that sugars contribute to obesity.

It's also indisputable that sugar reduction should be part of any weight loss program. And of all sources of calories to limit, since sugar is just empty calories, contains no essential nutrients, reducing sugar consumption is obviously the place to start. And again, this is what the researchers funded by the likes of Dr. Pepper and Coca-Cola are saying.

The primary author, Richard Kahn, is infamous for his defense of the American Beverage Association, the soda industry. He was chief science officer at the American Diabetes Association when they signed a million-dollar sponsorship deal with the world's largest candy company. Maybe the American Diabetes Association should rename itself the American Junk Food Association. But what do you expect from an organization that was started with drug industry funding?

The bottom line is that randomized controlled trials show that increasing sugars intake increases calorie intake, and this leads to body weight gain in adults, and sugar reduction leads to body weight loss in children. For example, when researchers randomized individuals to either increase their intake of table sugar or decrease their intake, the added sugar group gained about 3 and 1/2 lb over 10 weeks, whereas the reduced sugar group lost about 2 and 1/2 lb. A systematic review and meta-analysis of all such ad libitum diet studies, meaning real-life studies where sugar levels were changed, but people could otherwise eat whatever they wanted, reduced intake of dietary sugars resulted in a decrease in body weight, whereas increased sugars intake resulted in a comparable increase in weight. The researchers conclude that, considering the rapid weight gain that occurs after an increased intake of sugars, it seems reasonable to advise people to cut down.

Vinegar and Blood Sugar Control

Findings from observational studies have been more ambiguous though, with the association found between obesity and sweetened beverage intake, but failing to show consistent correlations with sugary foods. Most such studies rely on self-reported data, however, and obese people tend to underreport sugar-rich foods.

One can measure trace sucrose levels in the urine, however, to not only get an objective measure of actual sugar intake, but to exclude contributions from other sweeteners such as high-fructose corn syrup. When researchers

have done this, they discovered that sugar intake is indeed not only associated with greater odds of obesity and greater waist circumference on a snapshot in time cross-sectional basis, but in a prospective cohort study over time. Using urinary sucrose as a measure of sucrose intake, those in the highest versus lowest fifth for sucrose intake had more than a 50% greater risk of being overweight or obese. Denying evidence that sugars are harmful to health has evidently been at the heart of the sugar industry's defense. But when the evidence is undeniable, like the link between sugar and cavities, they switch from denial to deflection, like trying to switch attention from restricting intake to coming up with some kind of vaccine against tooth decay.

We seem to have reached a similar point with obesity with the likes of the sugar bureau switching from denial to deflection by commissioning research suggesting obese individuals would not benefit from losing weight, a stance contradicted by hundreds of studies across four continents involving more than 10 million participants. Finally today, how vinegar can help with blood sugar control. A double-blind, placebo-controlled, randomized study found that body weight and belly fat were significantly reduced adding just a single tablespoon of vinegar to one's daily diet.

But is there any benefit to vinegar consumption if you're not overweight? Well, their triglycerides normalized and on the two tablespoons a day dose, there was a dip in blood pressure. But those effects may have just been because of the weight loss. Other than taste, is there any benefit to normal weight individuals sprinkling vinegar on their salad? What about vinegar for blood sugar control? If you feed people a massive amount of sugar, half cup of table sugar, as their blood sugar spike, their artery function can become impaired. And the higher the blood sugars go, the more the arteries take a hit. There's a drug though that can block sugar absorption and by blunting the blood sugar spike with a drug, you can prevent the arterial dysfunction demonstrating it's probably good for your heart if you don't have big blood sugar spikes after meals. And indeed, how high your blood sugar spike after a meal is a predictor for cardiovascular mortality. So the people who eat lots of high glycemic foods like sugary foods and refined grains tend to have more heart attacks and strokes. Yes.

And they appear more likely to get diabetes, but maybe people who eat lots of frosted flakes and Wonder Bread also have other bad dietary habits. The diets that have been put to the test in randomized controlled trials and proven to prevent diabetes are the ones focusing on cutting down on saturated fat and ramping up the consumption of fiber-rich whole plant foods such as fruits, vegetables, and whole grains without specific regard to lower or higher glycemic loads. The drug has been put to the test though in blunting one's mealtime blood sugar spikes does seem to reduce the risk of developing diabetes.

As well as reduce the risk of heart attacks and high blood pressure. So is there any way to prevent these blood sugar spikes without having to take drugs? Well, one way would be to not sit down to have a cup of sugar. Yes, the drug can slow the progression of your atherosclerosis, but wouldn't it be better to eat a diet that actually reverses heart disease, reverses diabetes? The healthiest diet to prevent the meal-related blood sugar and fat spikes, the oxidation, inflammation, is a diet centered around whole plant foods.

But what if you really want a bagel? Instead of spreading drugs on it, spreading on some almond butter may help blunt the blood sugar spike from refined carbs. And another option is to dip your baguette in some balsamic vinegar.

The consumption of vinegar with meals was evidently used as a home remedy for diabetes before drugs came along, but wasn't put to the test until 1988. After all, how much money can be made from vinegar?

NutritionFacts Resources and Closing

Well, according to the Vinegar Institute, millions of dollars, but a single diabetes drug like Rezulin can pull in billions before it was pulled from the market for killing too many people by shutting down their livers. The drug company still made off like a bandit having to pay out less than a billion to the grieving families for covering up the danger. No liver failure from a peanut butter-smeared bagel though, cutting the blood sugar response in half. And the same with vinegar, if you chug down four teaspoons of apple cider vinegar diluted in water, you get that same blunting of the spike and you get the additional advantage over the nuts of lowering insulin levels in the blood, something peanut butter apparently can't do. But presumably better than a bagel with lox as fish causes triple the insulin

response or red wine, which also increases insulin levels, though not as much as the fish.

And also shoots up triglycerides, though dealcoholized red wine, non-alcoholic wine, doesn't have the same problem. Okay, but what about vinegar? Not only may a tablespoon a day tend to improve cholesterol and triglycerides over time, vinegar can drop triglycerides within an hour of a meal along with decreased blood sugars and the insulin spike potentially offering the best of all worlds.

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