

Big Sugar's Sweet Little Lies

How the industry kept scientists from asking: Does sugar kill?

—By Gary Taubes and Cristin Kearns Couzens



Illustration: ChrisBuzelli

ON A BRISK SPRING Tuesday in 1976, a pair of executives from the Sugar Association stepped up to the podium of a Chicago ballroom to accept the Oscar of the public relations world, the Silver Anvil award for excellence in "the forging of public opinion." The trade group had recently pulled off one of the greatest turnarounds in PR history. For nearly a decade, the sugar industry had been buffeted by crisis after crisis as the media and the public soured on sugar and scientists began to view it as a likely cause of obesity, diabetes, and heart disease. Industry ads claiming that eating sugar helped you lose weight had been called out by the Federal Trade Commission, and the Food and Drug Administration had launched a review of whether sugar was even safe to eat. Consumption had declined 12 percent in just two years, and producers could see where that trend might lead. As John "JW" Tatem Jr. and Jack O'Connell Jr.,

the Sugar Association's president and director of public relations, posed that day with their trophies, their smiles only hinted at the coup they'd just pulled off.

Their winning campaign, crafted with the help of the prestigious public relations firm Carl Byoir & Associates, had been prompted by a poll showing that consumers had come to see sugar as fattening, and that most doctors suspected it might exacerbate, if not cause, heart disease and diabetes. With an initial annual budget of nearly \$800,000 (\$3.4 million today) collected from the makers of Dixie Crystals, Domino, C&H, Great Western, and other sugar brands, the association recruited a stable of medical and nutritional professionals to allay the public's fears, brought snack and beverage companies into the fold, and bankrolled scientific papers that contributed to a "highly supportive" FDA ruling, which, the Silver Anvil application boasted, made it "unlikely that sugar will be subject to legislative restriction in coming years."



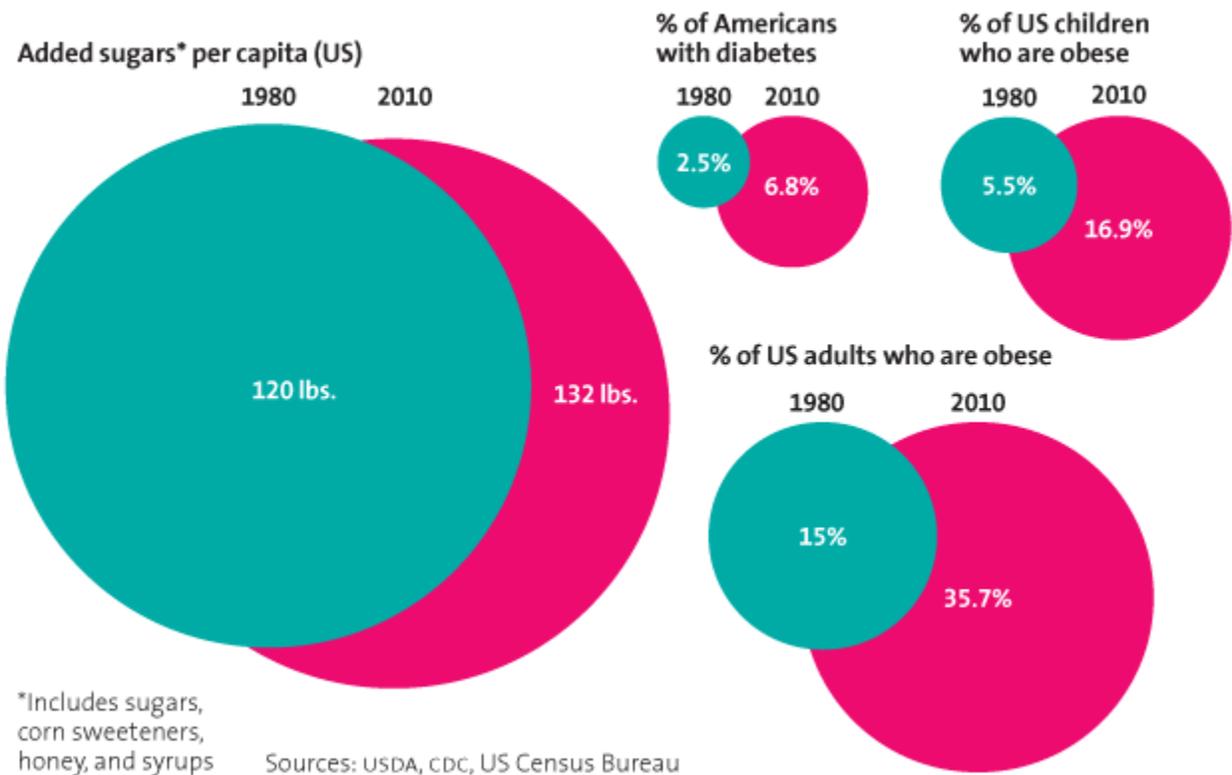
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The story of sugar, as Tatem told it, was one of a harmless product under attack by "opportunists dedicated to exploiting the consuming public." Over the subsequent decades, it would be transformed from what the *New York Times* in 1977 had deemed "a villain in disguise" into a nutrient so seemingly innocuous that even the American Heart Association and the American Diabetes Association approved it as part of a healthy diet. Research on the suspected links between sugar and chronic disease largely ground to a halt by the late 1980s, and scientists came to view such pursuits as a career dead end. So effective were the Sugar Association's efforts that, to this day, no consensus exists about sugar's potential dangers. The industry's PR campaign

corresponded roughly with a significant rise in Americans' consumption of "caloric sweeteners," including table sugar (sucrose) and high-fructose corn syrup (HFCS). This increase was accompanied, in turn, by a surge in the chronic diseases increasingly linked to sugar. Since 1970, obesity rates in the United States have more than doubled, while the incidence of diabetes has more than tripled. (The chart below uses sugar "availability" numbers rather than the USDA's speculative new consumption figures.)

SUCROSE FOR COMFORT

As Americans eat more sugar, diabetes and obesity have soared.



Mother Jones

Precisely how did the sugar industry engineer its turnaround? The answer is found in more than 1,500 pages of internal memos, letters, and company board reports we discovered buried in the archives of now-defunct sugar companies as well as in the recently released papers of deceased researchers and consultants who played key roles in the industry's strategy. They show how Big Sugar used

Big Tobacco-style tactics to ensure that government agencies would dismiss troubling health claims against their products. Compared to the tobacco companies, which knew for a fact that their wares were deadly and spent billions of dollars trying to cover up that reality, the sugar industry had a relatively easy task. With the jury still out on sugar's health effects, producers simply needed to make sure that the uncertainty lingered. But the goal was the same: to safeguard sales by creating a body of evidence companies could deploy to counter any unfavorable research.

For 40 years, the sugar industry's priority has been to shed doubt on studies suggesting that its product makes people sick.

This decades-long effort to stack the scientific deck is why, today, the USDA's dietary guidelines only speak of sugar in vague generalities. ("Reduce the intake of calories from solid fats and added sugars.") It's why the FDA insists that sugar is "generally recognized as safe" despite considerable evidence suggesting otherwise. It's why some scientists' urgent calls for regulation of sugary products have been dead on arrival, and it's why—absent any federal leadership—New York City Mayor Michael Bloomberg felt compelled to propose a ban on oversized sugary drinks that passed in September.

In fact, a growing body of research suggests that sugar and its nearly chemically identical cousin, HFCS, may very well cause diseases that kill hundreds of thousands of Americans every year, and that these chronic conditions would be far less prevalent if we significantly dialed back our consumption of added sugars. Robert Lustig, a leading authority on pediatric obesity at the University of California-San Francisco (whose arguments Gary explored in a 2011 *New York Times Magazine* cover story), made this case last February in the prestigious journal *Nature*. In an article titled "The Toxic Truth About Sugar," Lustig and two colleagues observed that sucrose and HFCS are addictive in much the same way as cigarettes and alcohol, and that overconsumption of them is driving worldwide epidemics of obesity and type 2 diabetes (the type associated with obesity). Sugar-related diseases are costing America around \$150 billion a year, the authors estimated, so federal health officials need to step up and consider regulating the stuff.

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The Sugar Association dusted off what has become its stock response: The Lustig paper, it said, "lacks the scientific evidence or consensus" to support its claims, and its authors were irresponsible not to point out that the full body of science "is inconclusive at best." This inconclusiveness, of course, is precisely what the Sugar Association has worked so assiduously to maintain. "In confronting our critics," Tatem explained to his board of directors back in 1976, "we try never to lose sight of the fact that no confirmed scientific evidence links sugar to the death-dealing diseases. This crucial point is the lifeblood of the association."

THE SUGAR ASSOCIATION'S earliest incarnation dates back to 1943, when growers and refiners created the Sugar Research Foundation to counter World War II sugar-rationing propaganda—"How Much Sugar Do You Need? None!" declared one government pamphlet. In 1947, producers rechristened their group the Sugar Association and launched a new PR division, Sugar Information Inc., which before long was touting sugar as a "sensible new approach to weight control." In 1968, in the hope of enlisting foreign sugar companies to help defray costs, the Sugar Association spun off its research division as the International Sugar Research Foundation. "Misconceptions concerning the causes of tooth decay, diabetes, and heart problems exist on a worldwide basis," explained a 1969 ISRF recruiting brochure.

As early as 1962, internal Sugar Association memos had acknowledged the potential links between sugar and chronic diseases, but at the time sugar executives had a more pressing problem: Weight-conscious Americans were switching in droves to diet sodas—particularly Diet Rite and Tab—sweetened with cyclamate and saccharin. From 1963 through 1968, diet soda's share of the soft-drink market shot from 4 percent to 15 percent. "A dollar's worth of sugar," ISRF vice president and research director John Hickson warned in an internal review, "could be replaced with a dime's worth" of sugar alternatives.

"If anyone can undersell you nine cents out of 10," Hickson told the New York Times in 1969, "you'd better find some brickbat you can throw at him."

By then, the sugar industry had doled out more than \$600,000 (about \$4 million today) to study every conceivable harmful effect of cyclamate sweeteners, which are still sold around the world under names like Sugar Twin and Sucaryl. In 1969, the FDA banned cyclamates in the United States based on a study suggesting they could cause bladder cancer in rats. Not long after, Hickson left the ISRF to work for the Cigar Research Council. He was described in a confidential tobacco industry memo as a "supreme scientific politician who had been successful in condemning cyclamates, on behalf of the [sugar industry], on somewhat shaky evidence." It later emerged that the evidence suggesting that cyclamates caused cancer in rodents was not relevant to humans, but by then the case was officially closed. In 1977, saccharin, too, was nearly banned on the basis of animal results that would turn out to be meaningless in people.

Meanwhile, researchers had been reporting that blood lipids—cholesterol and triglycerides in particular—were a risk factor in heart disease. Some people had high cholesterol but normal triglycerides, prompting health experts to recommend that they avoid animal fats. Other people were deemed "carbohydrate sensitive," with normal cholesterol but markedly increased triglyceride levels. In these individuals, even moderate sugar consumption could cause a spike in triglycerides. John Yudkin, the United Kingdom's leading nutritionist, was making headlines with claims that sugar, not fat, was the primary cause of heart disease.

In 1967, the Sugar Association's research division began considering "the rising tide of implications of sucrose in atherosclerosis." Before long, according to a confidential 1970 review of industry-funded studies, the newly formed ISRF was spending 10 percent of its research budget on the link between diet and heart disease. Hickson, the ISRF's vice president, urged his member corporations to keep the results of the review under wraps. Of particular concern was the work of a University of Pennsylvania researcher on "sucrose sensitivity," which sugar executives feared was "likely to reveal evidence of harmful effects." One ISRF consultant recommended that sugar companies get to the truth of the matter by

sponsoring a full-on study. In what would become a pattern, the ISRF opted not to follow his advice. Another ISRF-sponsored study, by biochemist Walter Pover of the University of Birmingham, in England, had uncovered a possible mechanism to explain how sugar raises triglyceride levels. Pover believed he was on the verge of demonstrating this mechanism "conclusively" and that 18 more weeks of work would nail it down. But instead of providing the funds, the ISRF nixed the project, assessing its value as "nil."

One diabetes expert testified that anything more than 70 pounds per person per year—about half of what is sold in America today—might spark epidemics.

The industry followed a similar strategy when it came to diabetes. By 1973, links between sugar, diabetes, and heart disease were sufficiently troubling that Sen. George McGovern of South Dakota convened a hearing of his Select Committee on Nutrition and Human Needs to address the issue. An international panel of experts—including Yudkin and Walter Mertz, head of the Human Nutrition Institute at the Department of Agriculture—testified that variations in sugar consumption were the best explanation for the differences in diabetes rates between populations, and that research by the USDA and others supported the notion that eating too much sugar promotes dramatic population-wide increases in the disease. One panelist, South African diabetes specialist George Campbell, suggested that anything more than 70 pounds per person per year—about half of what is sold in America today—would spark epidemics.

In the face of such hostile news from independent scientists, the ISRF hosted its own conference the following March, focusing exclusively on the work of researchers who were skeptical of a sugar/diabetes connection. "All those present agreed that a large amount of research is still necessary before a firm conclusion can be arrived at," according to a conference review published in a prominent diabetes journal. In 1975, the foundation reconvened in Montreal to discuss research priorities with its consulting scientists. Sales were sinking, Tatem reminded the gathered sugar execs, and a major factor was "the impact of consumer advocates who link sugar consumption with certain diseases."

Following the Montreal conference, the ISRF disseminated a memo quoting Errol Marliss, a University of Toronto diabetes specialist, recommending that the industry pursue "well-designed research programs" to establish sugar's role in the course of diabetes and other diseases. "Such research programs *might* produce an answer that sucrose is bad in certain individuals," he warned. But the studies "should be undertaken in a sufficiently comprehensive way as to produce results. A gesture rather than full support is unlikely to produce the sought-after answers."

Industry-funded science projects were vetted by a panel with reps from Hershey's, Coca-Cola, General Mills, and Nabisco.

A gesture, however, is what the industry would offer. Rather than approve a serious investigation of the purported links between sucrose and disease, American sugar companies quit supporting the ISRF's research projects. Instead, via the Sugar Association proper, they would spend roughly \$655,000 between 1975 and 1980 on 17 studies designed, as internal documents put it, "to maintain research as a main prop of the industry's defense." Each proposal was vetted by a panel of industry-friendly scientists and a second committee staffed by representatives from sugar companies and "contributing research members" such as Coca-Cola, Hershey's, General Mills, and Nabisco. Most of the cash was awarded to researchers whose studies seemed explicitly designed to exonerate sugar. One even proposed to explore whether sugar could be shown to boost serotonin levels in rats' brains, and thus "prove of therapeutic value, as in the relief of depression," an internal document noted.

At best, the studies seemed a token effort. Harvard Medical School professor Ron Arky, for example, received money from the Sugar Association to determine whether sucrose has a different effect on blood sugar and other diabetes indicators if eaten alongside complex carbohydrates like pectin and psyllium. The project went nowhere, Arky told us recently. But the Sugar Association "didn't care."

In short, rather than do definitive research to learn the truth about its product, good or bad, the association stuck to a PR scheme designed to "establish with the broadest possible audience—virtually everyone is a consumer—the safety of

sugar as a food." One of its first acts was to establish a Food & Nutrition Advisory Council consisting of a half-dozen physicians and two dentists willing to defend sugar's place in a healthy diet, and set aside roughly \$60,000 per year (more than \$220,000 today) to cover its cost.

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