

## Invited Commentary

## HEALTH CARE POLICY AND LAW

# Food Industry Funding of Nutrition Research

## The Relevance of History for Current Debates

Marion Nestle, PhD, MPH

**Industry-sponsored nutrition research**, like that of research sponsored by the tobacco, chemical, and pharmaceutical industries, almost invariably produces results that confirm the benefits or lack of harm of the sponsor's products, even when

[+ Author Audio Interview](#)

[← Related article](#)

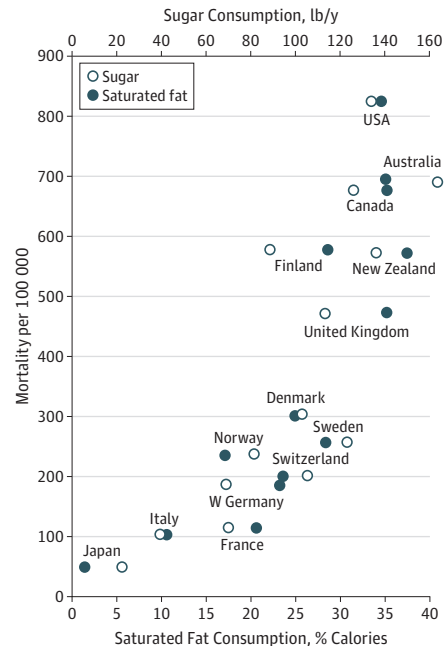
independently sponsored research comes to opposite conclusions.<sup>1</sup> Although considerable evidence demonstrates that those industries deliberately influenced the design, results, and interpretation of the studies they paid for,<sup>2</sup> much less is known about the influence of food-company sponsorship on nutrition research. Typically, the disclosure statements of sponsored nutrition studies state that the funder had no role in their design, conduct, interpretation, writing, or publication. Without a “smoking gun” it is difficult to prove otherwise.

In this issue of *JAMA Internal Medicine*, Kearns and colleagues<sup>3</sup> report on having found a smoking gun. From a deep dive into archival documents from the 1950s and 1960s, they have produced compelling evidence that a sugar trade association not only paid for but also initiated and influenced research expressly to exonerate sugar as a major risk factor for coronary heart disease (CHD). Although studies at that time indicated a relationship between high-sugar diets and CHD risk, the sugar association preferred scientists and policymakers to focus on the role of dietary fat and cholesterol. The association paid the equivalent of more than \$48 000 in today's dollars to 3 nutrition professors—at Harvard no less—to publish a research review that would refute evidence linking sugars to CHD.

The sponsored review appeared in 2 parts in the *New England Journal of Medicine* in 1967. Its authors acknowledged support from the industry-funded Nutrition Foundation, but they did not mention the sugar association's specific funding of their review. Their first article demonstrates a close correlation between sugar and fat “consumption” (actually amounts in the food supply) and mortality in 14 countries (Figure).<sup>4</sup> To minimize the association with sugar, the authors seem to have cherry-picked existing data. Despite their having previously published studies linking both fats and sugars to CHD risk, their review gave far more credence to studies implicating saturated fat than it did to those implicating sugars.

The documents leave little doubt that the intent of the industry-funded review was to reach a foregone conclusion. The investigators knew what the funder expected, and produced it. Whether they did this deliberately, unconsciously, or because they genuinely believed saturated fat to be the greater threat is unknown. But science is not supposed to work

Figure. Close Epidemiological Correlations Between Sugar and Saturated Fat “Consumption” and Mortality in 14 Countries



Adapted from the article by McGandy et al<sup>4</sup> and used with permission. Courtesy of Domingo Piñero, PhD.

this way. The documents make this review seem more about public relations than science.

This 50-year-old incident may seem like ancient history, but it is quite relevant, not least because it answers some questions germane to our current era. Is it really true that food companies deliberately set out to manipulate research in their favor? Yes, it is, and the practice continues. In 2015, the *New York Times* obtained emails revealing Coca-Cola's cozy relationships with sponsored researchers who were conducting studies aimed at minimizing the effects of sugary drinks on obesity.<sup>5</sup> Even more recently, the Associated Press obtained emails showing how a candy trade association funded and influenced studies to show that children who eat sweets have healthier body weights than those who do not.<sup>6</sup> The results of such studies have obvious implications for public health.

For this reason, it is of more than academic interest to find out when food companies began to fund research for public relations purposes. Fred Stare, then chair of Harvard's nutrition department and senior author of the 1967 review, began soliciting donations from food companies in the early 1940s

but insisted that these be unrestricted and pooled into a common fund for research and education.<sup>7</sup> If earlier examples to the contrary occurred, they were not disclosed. If nothing else, the analysis by Kearns et al<sup>3</sup> makes it clear why full disclosure of funding sources is essential.

In addition, their study is highly relevant to ongoing debates about the relative harm of fats and sugars. By 1967, as the Figure shows, both sugar and saturated fat had been identified as mortality risk factors. But for decades following the funded review, scientists and dietary guidelines focused on reducing saturated fat as the primary strategy for CHD prevention. They also advised consuming sugars in moderation, but mainly to prevent tooth decay. Today, the balance has shifted to less concern about fat and much greater concern about sugars.

It is worth noting that this debate focuses on sugars and saturated fats rather than on the foods that contain them. This approach, termed “nutritionism” to refer to the reductive use of single nutritional factors to stand for foods and dietary patterns, is inherently misleading.<sup>8</sup> In excess, both sugars and saturated fat are markers of Western dietary patterns high in calories from meat, processed foods, and sugary drinks, all associated with increased chronic disease risk.<sup>9</sup>

As George Santayana famously said in *Reason of Common Sense* (1905), “Those who cannot remember the past are con-

demned to repeat it.” Today, it is almost impossible to keep up with the range of food companies sponsoring research—from makers of the most highly processed foods, drinks, and supplements to producers of dairy foods, meats, fruits, and nuts—typically yielding results favorable to the sponsor’s interests.<sup>1</sup> Food company sponsorship, whether or not intentionally manipulative, undermines public trust in nutrition science, contributes to public confusion about what to eat, and compromises Dietary Guidelines in ways that are not in the best interest of public health.

Kearns et al<sup>3</sup> urge policymakers to view industry-funded studies with some skepticism. This is excellent advice. Disclosure of funding sources helps but is not sufficient to address the potential conflicts that can occur with such funding. These authors<sup>3</sup> have done the nutrition science community a great public service by bringing this historical example to light. May it serve as a warning not only to policymakers, but also to researchers, clinicians, peer reviewers, journal editors, and journalists of the need to consider the harm to scientific credibility and public health when dealing with studies funded by food companies with vested interests in the results—and to find better ways to fund such studies and to prevent, disclose, and manage potentially conflicted interests.

#### ARTICLE INFORMATION

**Author Affiliation:** Department of Nutrition and Food Studies, New York University, New York.

**Corresponding Author:** Marion Nestle, PhD, MPH, Department of Nutrition and Food Studies, New York University, 411 Lafayette, Fifth Floor, New York, NY 10003-7035 ([marion.nestle@nyu.edu](mailto:marion.nestle@nyu.edu)).

**Published Online:** September 12, 2016.  
doi:10.1001/jamainternmed.2016.5400.

**Conflict of Interest Disclosure:** Dr Nestle’s salary from New York University supports her research, manuscript preparation, and Website at <http://www.foodpolitics.com>. She also earns royalties from books, and honoraria and travel, from lectures about matters relevant to this Commentary.

#### REFERENCES

1. Nestle M. Corporate funding of food and nutrition research: science or marketing? *JAMA Intern Med.* 2016;176(1):13-14.

2. White J, Bero LA. Corporate manipulation of research: strategies are similar across five industries. *Stanford Law Pol Rev.* 2010;21(1):105-134.

3. Kearns CE, Schmidt LA, Glantz SA. Sugar industry and coronary heart disease research: a historical analysis of internal industry documents [published online September 12, 2016]. *JAMA Intern Med.* doi:10.1001/jamainternmed.2016.5394.

4. McGandy RB, Hegsted DM, Stare FJ. Dietary fats, carbohydrates and atherosclerotic vascular disease. *N Engl J Med.* 1967;277(4):186-192.

5. O’Connor A. Coca-Cola funds scientists who shift blame for obesity away from bad diets. *New York Times.* August 9, 2015. <http://well.blogs.nytimes.com/2015/08/09/coca-cola-funds-scientists-who>

[-shift-blame-for-obesity-away-from-bad-diets/?\\_r=1](#). Accessed July 11, 2016.

6. Choi CAP. Exclusive: how candy makers shape nutrition science. Associated Press. The Big Story, June 2, 2016. <http://bigstory.ap.org/f9483d554430445fa6566bb0aaa293d1>. Accessed July 11, 2016.

7. Stare FJ. *Adventures in Nutrition.* Hanover, MA: Christopher Publishing; 1991.

8. Scrinis G. *Nutritionism: The Science and Politics of Dietary Advice.* New York, NY: Columbia University Press; 2013.

9. Nestle M, Nesheim M. *Why Calories Count: From Science to Politics.* Berkeley: University of California Press; 2012.