

A recent story that has been appearing on the internet is that *Harvard Researchers Paid to Support Sugar* and this is the reason why sugar and carbohydrates have been exonerated in their role of causing heart disease. Fats and saturated fats have unfairly blamed for the obesity and heart disease epidemic.

The source for this information is a Gary Taubes and Cristin Couzens Kearns web page article [1] and a paper by Cristin Kearns and colleagues. [2]

Early warning signals of the coronary heart disease (CHD) risk of sugar (sucrose) emerged in the 1950s. By the 1960s, 2 prominent physiologists were championing divergent causal hypotheses of CHD [2], [3]

John Yudkin identified added sugars as the primary agent, while Ancel Keys identified total fat, saturated fat, and dietary cholesterol. However, by the 1980s, few scientists believed that added sugars played a significant role in CHD, and the first 1980 Dietary Guidelines for Americans [4] focused on reducing total fat, saturated fat, and dietary cholesterol for CHD prevention. [3]

The references given for [2] and [3] are:

- Taubes, G. *Good Calories, Bad Calories: Challenging the Conventional Wisdom on Diet, Weight Control, and Disease*. New York, NY: Knopf; 2007.
- Teicholz, N. *The Big Fat Surprise: Why Butter, Meat, and Cheese Belong in a Healthy Diet*. New York, NY: Simon and Schuster; 2014.

What If It's All Been a Big Fat Lie?

Gary Taubes interviewed a number of prominent nutrition experts for his New York Times article *What if it has been a Big Fat Lie?* [4]

This article supported *Robert Atkins Diet Revolution*, a high-fat, high-protein, high animal-based diet. This article resulted in the publication of the book *Good Calories, Bad Calories* five years later.

Bonnie Liebman reviewed Taubes' New York Time Magazine article in 2002. [5]

Barbara Rolls from Pennsylvania State University stated, "He knows how to spin a yarn. What frightens me is that he picks and chooses his facts."

Taubes interviewed her for some six hours, and she sent him "a huge bundle of papers," but he didn't quote a word of it. "If the facts don't fit in with his yarn, he ignores them."

Gerald Reaven from Stanford University who created the term Syndrome X stated, "The article was incredibly misleading. My quote was correct, but the context suggested that I support eating saturated fat. I was horrified."

John Farquhar also from Stanford stated, "I was greatly offended at how Gary Taubes tricked us all into coming across as supporters of the Atkins diet."

Taubes claims that the esteemed Harvard epidemiologist Walter Willett is a supporter of Atkin's low-carbohydrate diet. Willet writes, "I certainly don't recommend it [the Atkins' Diet]. There's a clear benefit for reducing cardiovascular risk from replacing unhealthy fats—saturated and trans—with healthy fats. And I told Taubes several times that red meat is associated with a higher risk of colon and possibly prostate cancer, but he left that out."

Both Teicholz and Taubes are supported and funded by the Beef Industry. According to Amanda Radke, writing in the Beef magazine states,

Today's best beef advocates wear a variety of hats — from greenhouse gas expert Frank Mitloehner who debunks misinformation about cattle production and climate change to nutrition writers like Nina Teicholz or Gary Taubes who turn against conventional health advice to promote diets rich in animal fats and proteins. [6]

John Yudkin and Robert Lustig

John Yudkin's 1972 book, *Pure, White and Deadly: The Problem with Sugar* [7] was (and still

is) extremely influential.

Robert Lustig wrote the introduction to a reissue of the book in 2012.[8]

According to Lustig,

Keys won the battle. Yudkin was thrown under the bus. And—well, he was discredited by numerous societies basically saying that he did not have the data to make his claims about the importance of sugar.[9]

Lustig's admiration for Yudkin is unfounded. Yudkin was unable to produce the data to support his contention that sugar causes heart disease. This is how medical research works. **You need to be able to produce data.** The reason that the sugar hypothesis lost support is because there is no evidence to support it.

Nutritional Science Initiative (NuSi) Studies

To overcome this limitation, two studies were funded by the Laura and John Arnold Foundation through the Nutritional Science Initiative (NuSi) organisation that was founded by Gary Taubes and Peter Attia to promote low-carbohydrate nutritional science.

The first study was published in 2016. [10]

This study investigated whether an isocaloric low-carbohydrate, ketogenic diet is associated with changes in energy expenditure, respiratory quotient and body composition compared with a "high-carbohydrate baseline diet".

Seventeen overweight or obese men were involved . Firstly they consumed a high-carbohydrate baseline diet for 4 weeks followed by a ketogenic diet with the same amount of calories.

According to the authors, **"The ketogenic diet was not accompanied by increased body fat**

loss. It was associated with relatively small increases in energy expenditure that were near the limits of detection with the use of state-of-the-art technology.”

The diets were energy restricted. People are not comfortable with a restricted food intake and low-term compliance is low. It is not a practical diet.

The comparison diet is NOT a high-carbohydrate diet. The macronutrient intake is carbohydrate (50%), fat (35%) and protein (15%) which is similar to the standard American diet. The amount of fibre on both diets is extremely low, with the high-carbohydrate diet having 24g and the ketogenic diet 13g. The recommended amount is 25-30g which is much less than the optimal amount. The health benefits of any diet is not measured by the macronutrient intake.

This study, funded by low-carbohydrate, ketogenic diet supporters failed to validate the hypothesis.

Since the first study did not achieve the desired results, another attempt was made. A second 2018 study involved 609 adults without diabetes with a body mass index between 28 and 40 (overweight to very obese).[11]

The participants consumed a “low-fat” or low-carbohydrate, energy restricted diet for 12 months.

It also investigated if a genotypes pattern relating to insulin secretion was relevant.

The macronutrient composition for the “low-fat diet” was carbohydrate (48%), fat (29%) and protein (21%). A diet of 29% fat is NOT a low-fat diet. The low-carbohydrate diet composition was carbohydrate (30%), fat (45%) and protein (23%).

There were 18 adverse events or serious adverse events that were evenly distributed across the 2 diet groups.

This study suffers from the same limitations as the first. Both diets are very unhealthy and the participants were unwell at the start of the 12 month period and were still unwell at the end of the 12 months.

According to the authors of this 12-month weight-loss diet study, there was no difference in weight change between the “low-fat diet” and the low-carbohydrate diet or the two genotype patterns. They state that “neither of the 2 hypothesized predisposing [genotype] factors was helpful in identifying which diet was better for whom”.

John Yudkin and Ancel Keys

Popular commentators make the simplistic conclusion that cause of heart disease is either sugar or saturated fat which was the result of an intense personal battle between John Yudkin and Ancel Keys.

Many commentators criticised Yudkin because “he did not have the data” to support his contention that sugar caused heart disease. Mortality from heart disease started reducing in 1966 in U.S., Finland, and Australia. It was another 10 years before this happened in the United Kingdom because of Yudkin’s influence.[12]

Geoffrey Rose believed that there would have been 25,000 fewer deaths in England and Wales if the gains made in Australia and America were duplicated in the United Kingdom.[13]

This does not mean that Keys approved of the high level of sugar consumption:

None of what is said here should be taken to mean approval of the common high level of sucrose in many diets. But there are plenty of good arguments to reduce the flood of dietary sucrose without building a mountain of nonsense about coronary heart disease.[14]

The Mediterranean diet as described and advocated by Ancel and Margaret Keys is based on the diets of Greece, southern Italy and the Mediterranean coasts of Spain and France of the 1960s. Below is how Keys described the diet.

The heart of what we now consider the Mediterranean diet is mainly vegetarian [or lactovegetarian]: pasta in many forms, leaves sprinkled with olive oil, all kinds of vegetables in season, and often cheese, all finished off with fruit, and frequently washed down with wine.[15]

Keys noted in 1980, “Responsible students of the coronary problem long ago abandoned the idea of seeking the cause of the disease, agreeing that several, perhaps many, variables are involved in almost all cases.”[16] As the title of this report (Seven Countries: A Multivariate Analysis of Death and Coronary Heart Disease) indicates, Keys and his colleagues were examining a number of different variables in relation to heart disease.

Diabetes and Whole-Food, Plant-Based Diets

McDougall showed significant improvement in diabetic and cardiovascular markers after seven days on a low-fat, plant-based diet. Carbohydrate intake was approximately 80% of total energy with fat representing 10% or less. [enf_note]McDougall, J. et al. (2014) Effects of 7 days on an ad libitum low-fat vegan diet: the McDougall Program cohort. *Nutrition Journal*. 13 (99), 1-7.[/efn_note]

Elevated markers were reduced significantly after only 7 days: cholesterol (15%), systolic blood pressure (9%), triglycerides (39%), glucose (4%), blood urea nitrogen (39%) and creatinine (6%).

Neale Barnard, David Jenkins and colleagues compared a low-fat, plant-based diet to an American Diabetes Association diet. The plant-based diet out performed that ADA diet and showed a significant improvement in all markers measured over the 22 weeks of the trial. [17] [18] [19]

David Jenkins is the Toronto-based researcher who created the glycaemic index.

Results were evaluated at 22 weeks and 74 weeks. The results in the following articles are from 22 weeks because these results distinguish between those participants that did not reduce their medications.

[The Ketogenic Disadvantage](#)

[The Keto Diet Slays the Opposition - not true](#)

Health and Food

The food we eat is a complex combination of many components— many different types of fat, carbohydrates, amino acids, and dietary fiber along with a multitude of micro-nutrients including vitamins, minerals, carotenoids, and polyphenols. Focusing on one component such as saturated fats or cholesterol may help understand some elements of health. However, the complex interaction between even two or three components make it impossible to fully comprehend the effects of nutrition in real life. Most medical and nutritional studies are only concerned with the effects of one dietary component or intervention.

The National Geographic has been involved in longevity studies since the 1970s. Two Mediterranean regions have been studied extensively as part of their Blue Zones project.^[20]

The conclusion is that “beans, whole grains, and garden vegetables are the cornerstones of all these longevity diets.”

Related Articles

[Robert Lustig and the Men Who Made Us Fat](#)

[Ancel Keys did not Manipulate his Data](#)

[Ancel Keys and the High-Fat Diet “Experts”](#)

[The Ketogenic Disadvantage](#)

[The Keto Diet Slays the Opposition - not true](#)

Movie

[WHO's Guidelines on Saturated Fats – The Reality and the Myths – View the Movie](#)

Footnotes

1. Taubes, G. & Kearns Couzens, C. (2012) *Big Sugar's Sweet Little Lies – Mother Jones* [online]. Available from: <https://www.motherjones.com/environment/2012/10/sugar-industry-lies-campaign/> (Accessed 6 March 2020).
2. Kearns, C. E. et al. (2016) Sugar Industry and Coronary Heart Disease Research: A Historical Analysis of Internal Industry Documents. *JAMA Internal Medicine*. 176 (11), 1680.
3. Kearns, C. E. et al. (2016) Sugar Industry and Coronary Heart Disease Research: A Historical Analysis of Internal Industry Documents. *JAMA Internal Medicine*. 176 (11), 1680.
4. Taubes, G. (2002) What If It's All Been a Big Fat Lie? *New York Times Magazine*
5. Liebman, B. (2002) *Big Fat Lies: The Truth About the Atkins Diet*. [online]. Available from: <https://cspinet.org/resource/big-fat-lies>.
6. Radke, A. (2018) Cowboy Ninja & Beef Checkoff create rancher fitness program | Beef Magazine [online]. Available from: <https://www.beefmagazine.com/farm-life/cowboy-ninja-beef-checkoff-create-rancher-fitness-program> (Accessed 4 March 2020).
7. Yudkin, J. (1972) *Pure, White and Deadly: the problem with sugar*. London: Davis-Poynter Limited.
8. Yudkin, J. (2012) *Pure, White and Deadly: How Sugar Is Killing Us and What We Can Do to Stop It*. 2012 Edition. Penguin Books.
9. Boulding, C. (2012) The Men Who Made Us Fat
10. Hall, K. D. et al. (2016) Energy expenditure and body composition changes after an isocaloric ketogenic diet in overweight and obese men. *The American Journal of Clinical Nutrition*. 104 (2), 324–333.
11. Gardner, C. D. et al. (2018) Effect of Low-Fat vs Low-Carbohydrate Diet on 12-Month Weight Loss in Overweight Adults and the Association With Genotype Pattern or Insulin Secretion: The DIETFITS Randomized Clinical Trial. *Journal of American Medical Association*. 319 (7), 667.

12. Truswell, A. S. (2010) *Cholesterol and Beyond: The Research on Diet and Coronary Heart Disease 1900-2000*. Springer Netherlands, 9.2.
13. Truswell, A. S. (2010) *Cholesterol and Beyond: The Research on Diet and Coronary Heart Disease 1900-2000*. Springer Netherlands, 31.4.
14. Keys, A. (1971) Sucrose in the Diet and Coronary Heart Disease. *Atherosclerosis*. 14 (1), 200.
15. Keys, A. (1995) Mediterranean diet and public health : personal reflections. *American Journal of Clinical Nutrition*. 61 (6), 1321S-1323S
16. Keys, A. et al. (1980) *Seven Countries: A Multivariate Analysis of Death and Coronary Heart Disease*. Cambridge, Massachusetts and London, England: Harvard University Press, 335.
17. Barnard, N. D. et al. (2006) A Low-Fat Vegan Diet Improves Glycemic Control and Cardiovascular Risk Factors in a Randomized Clinical Trial in Individuals With Type 2 Diabetes. *Diabetes Care*. 29 (8), 1777-1783.
18. Barnard, N. D. et al. (2009) A low-fat vegan diet and a conventional diabetes diet in the treatment of type 2 diabetes: a randomized, controlled, 74-wk clinical trial. *The American Journal of Clinical Nutrition*. 89 (5), 1588S-1596S.
19. Barnard, N. D. et al. (2009) Vegetarian and vegan diets in type 2 diabetes management. *Nutrition Reviews*. 67 (5), 255-263.
20. Buettner, D. (2012) *The Blue Zones*. Second Ed. Washington DC: National Geographic.