THE
CrossFit JOURNAL

What Should We Eat—and Why?

Gary Taubes and NuSI aim to correct a decades-old problem by telling the world what to eat—and backing their recommendations up with real science. Marty Cej reports.

By Marty Cej **October 2012**

All images: Courtesy of NuSI

"What right has the federal government to propose that the American people conduct a vast nutritional experiment, with themselves as subjects, on the strength of so very little evidence that it will do them any good?"—Philip Handler, president of the United States National Academy of Science, testifying to Congress in 1980 on the creation of the nutritional guidelines that still govern the American diet today.

Subscription info at journal.crossfit.com
Feedback to feedback@crossfit.com
Visit CrossFit.com

Gary Taubes is picking a fight. Again.

The best-selling author of *Good Calories, Bad Calories* and *Why We Get Fat* has partnered with Peter Attia, M.D., to launch a nonprofit organization with the ambitious goal of slashing the current U.S. obesity rate by more than half and the prevalence of diabetes by 75 percent by 2025. To do that, he'll have to topple the food pyramid, take on the medical establishment, and go toe-to-toe with the multi-trillion-dollar food and drug industries.

> It is Taubes' contention that the quality of the calories matters more than the quantity, and that the dietary guidelines that have dictated family meals for decades … are wrongheaded.

"That will be a problem," he admits. But, "if we get the science right, we can convince the scientific community, and they will want to speak out about it."

The founders of the Nutrition Science Initiative, or NuSI (pronounced NEW-see), say it has been created to "finally, and with scientific certainty, answer the question: 'What should we eat to be healthy?'"

The organization will fund research into nutrition with a rigor that has never been seen before, Taubes said. The scientists and researchers being recruited will come from varied backgrounds and, in many cases, hold opposing beliefs to the founders. They have one thing in common, though: the conviction that nutrition science fails to meet the same standards of proof and inquiry applied to other disciplines such as chemistry, biology or physics.

The NuSI scientific advisory board comprises Alan Sniderman, a lipid researcher at McGill University in Montreal, Que.; David Harlan, former head of the Diabetes, Endocrinology, and Metabolic Diseases branch of the National Institute of Diabetes and Digestive Kidney Diseases, now at the University of Massachusetts; Mitchel Lazar, of the University of Pennsylvania; and Kevin Schulman, of Duke University.

According to Taubes, the ambitious project is still in the early stages.

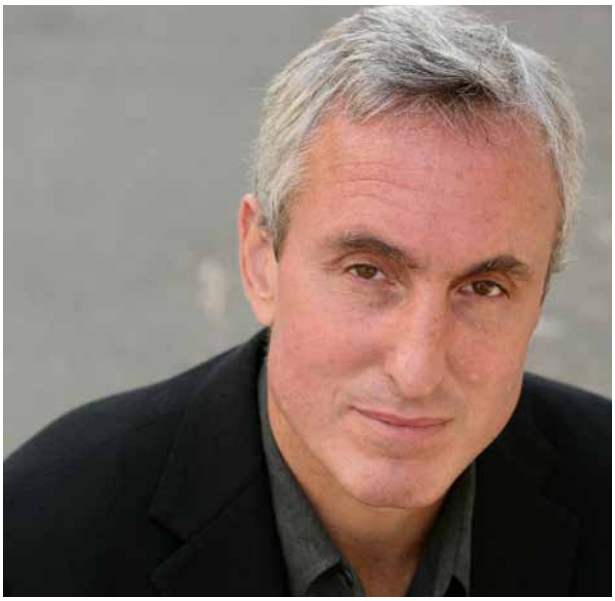
"We could be recruiting subjects by this time next year, but a lot of things need to go well before that," he said.

The work will be independent and funded entirely by private citizens and other organizations. The Laura and John Arnold Foundation, a philanthropic venture founded by hedge-fund manager John Arnold and his wife, has provided NuSI with $5 million in seed money. It may sound like a significant sum, but that generous gift represents just 0.003 percent of the almost $150 billion spent on treating obesity-related disease in the U.S. last year, with roughly half of that financed by Medicare and Medicaid. In 1998, the bill was $78.5 million.

More than one third, or 35.7 percent, of U.S. adults are obese the Centers for Disease Control and Prevention reported in a data brief published in January 2012, and some 16.9 percent of U.S. children and adolescents are obese. That means 78 million American adults and 12.5 million children and adolescents are obese.

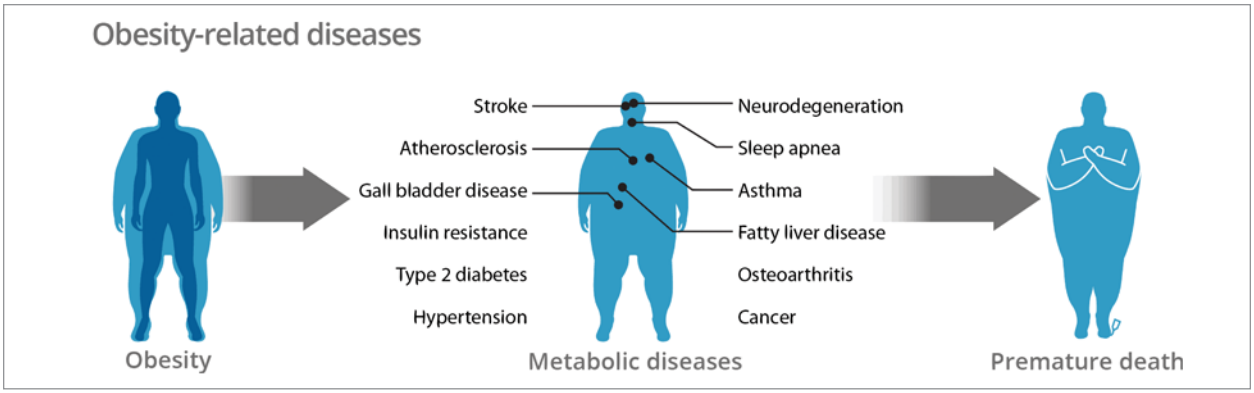
From 1960 through 1962, the obesity rate was just 13.4 percent, according to the U.S. Department of Health and Human Sciences, or just over one in 10 people.

But what does "obese" mean?



Taubes' goal is to hold nutrition to the same scientific standards as chemistry, biology and physics.

Subscription info at journal.crossfit.com
Feedback to feedback@crossfit.com
Visit CrossFit.com



Current "nutrition science" has failed to explain what we should eat to be healthy and fit, and the costs of that failure are enormous.

The CDC defines obesity for adults through the body mass index, or BMI, which is weight in kilograms divided by height in meters squared, rounded to one decimal place. Obesity is defined as BMI greater than or equal to 30. For example, for an adult who is 5'9" in height, he would be considered obese at 203 lb. or more. A score of 25.0 to 29.9 is considered overweight, while a number between 18.5 and 24.9 is considered normal.

Yet a tape measure, scale and a calculator don't really tell the story or count the human toll.

Obesity is considered a major contributory factor in coronary heart disease; Type 2 diabetes; cancers including endometrial, breast and colon; stroke; osteoarthritis; gynecological problems such as abnormal menses and infertility; and sleep apnea and other respiratory problems. There is also the terrible burden of depression and other mental illnesses.

In 2010, more than 40 million children under the age of five around the world were considered overweight, according to the World Health Organization (WHO). By 2020, the WHO estimates, obesity will be the single biggest killer on the planet, and those 40 million overweight children from 2010 will be entering their early teens, or perhaps nearing the end of their lives.

"Nobody wants to be obese," Taubes said. "If you can solve the problem, people will embrace it. The advice people are given now has not worked."

At the center of it all is government-sponsored nutrition information that essentially recommends a high-carbohydrate, low-fat diet. Carbohydrates in the form of grains, cereals and breads did not begin their transformation to the supposedly heart-healthy foundation of the food pyramid until the late 1960s. Carbohydrates stimulate the secretion of insulin, which influences fat storage in cells, but bad science could make carbs appear to be the preferred macronutrient because they contain less than half the calories per gram of fat.

In 1977, after years of discussion and debate, and in the face of opposition from the National Academy of Sciences and others, the U.S. Senate Select Committee on Nutrition and Human Needs, chaired by Senator George McGovern, produced *Dietary Goals for the United States*, the first recommendation of which was the increased consumption of complex carbohydrates and "naturally occurring sugars."

Taubes has argued in his books, his blog and articles for *The New York Times* that the fundamental tenet of America's nutritional wisdom—a calorie is a calorie—is not only the result of shoddy science and the influence of powerful business lobbies a generation ago but also the cause of the nation's obesity epidemic. Simply put, Taubes believes obesity is far more complex than boiling the issue down to the basic formula of calories in minus calories out equals weight gained or lost. This formula, however, is generally accepted as science in the world of nutrition.

So why does Taubes believe the science of nutrition failed up to this point? Essentially, the research just isn't good enough yet.

"The experimental subjects are human beings. They are expensive, they have minds of their own, there are behavioral and socio-economic variables, so everyone assumes that an adequate standard is the best that they can do," he said. "It's observational but it's not cause and effect. They are hypothesis-generating observations, not experiments."

Subscription info at journal.crossfit.com
Feedback to feedback@crossfit.com
Visit CrossFit.com

It is Taubes' contention that the quality of the calories matters more than the quantity, and that the dietary guidelines that have dictated family meals for decades—promoted by the government and supported by medical organizations such as the American Heart Organization—are wrongheaded. Never mind the global heavyweights in the food industry who profit most from the prevailing diet standards, such as Kraft Foods Inc. of the U.S. with a stock-market value of $71 billion, or the world's biggest food company, Nestle SA of Switzerland, which boasts a market cap of $201 billion and brands including Aero chocolate bars, DiGiorno frozen pizza and the Jenny Craig diet centers.

Taubes aims to prove them all wrong.

NuSI has recruited six scientists so far, and all six, Taubes said, believe his preconceptions to be wrong.

Taubes freely admits that he has firm expectations—hopes, really—that the results of the experiments NuSI will underwrite in the coming years will ratify his hypotheses. However, that strongly held personal bias is the same sort that he himself has argued does not belong in serious scientific study.

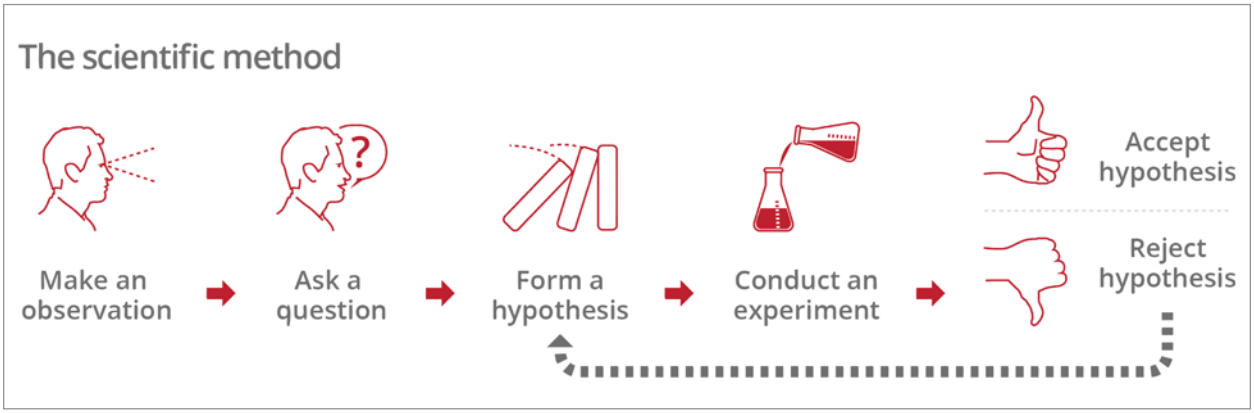
"We have our own preconceptions, but NuSI is about getting these hypotheses tested," he said. "We're not interested in finding people who will find what we want; we want them to find the truth."

NuSI has recruited six scientists so far, and all six, Taubes said, believe his preconceptions to be wrong. It will be their task to determine who, if anyone, is right. A press release dated Sept. 12 indicates that NuSI's researchers have very different backgrounds and perspectives on nutrition but are united by the belief that current nutritional science is not acceptable and has not produced definitive proof that should inform nutritional guidance. The press release is also clear that if NuSI research produces hard science that contradicts traditional guidelines, it will fund additional studies to confirm the results.

It is important to state that the U.S. is not alone. According to the Organization for Economic Cooperation and Development, fewer than 10 percent of people were obese before 1980. Since then, the rates have doubled or tripled in many countries, and in 19 of 34 OECD countries, the majority of the population is now overweight or obese.

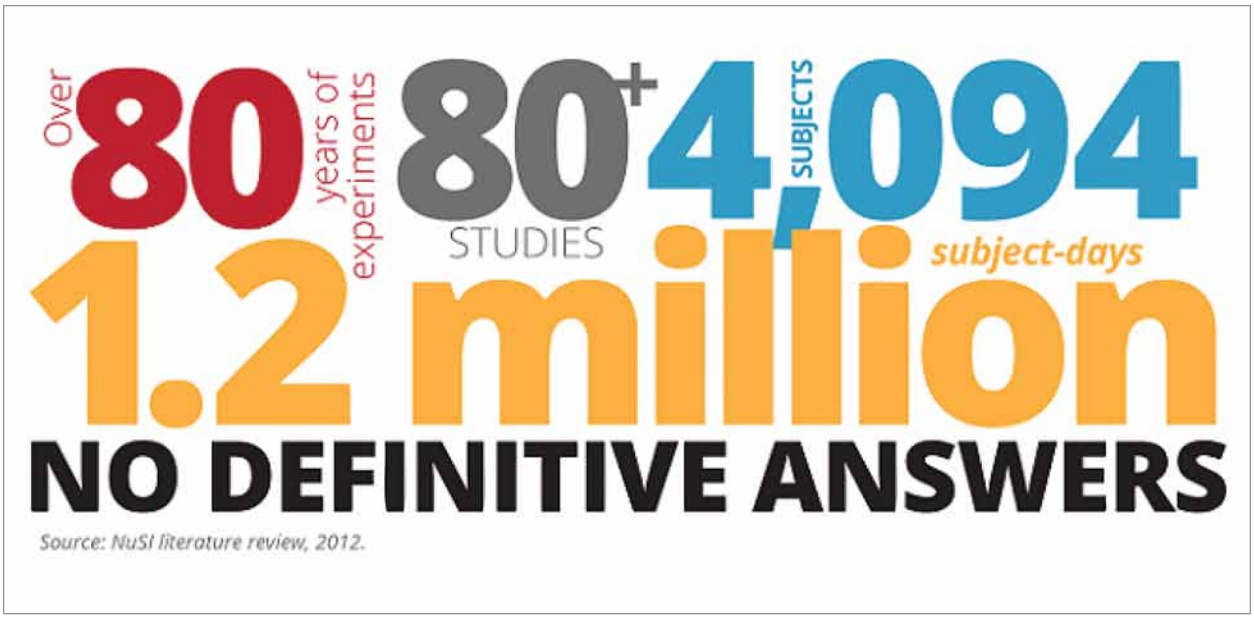
Mexico has the second largest percentage of obese people at 30 percent of the total population, New Zealand is third with 28.5 percent, Chile is fourth with a quarter if its population obese, and Australia is fifth with 24.6 percent. Korea and Japan both have obesity rates less than 4 percent.

In its 2012 report on obesity, the OECD said, "Severely obese people die eight to ten years sooner than those of normal-weight, similar to smokers, with every 15 extra kilograms increasing risk of early death by approximately 30 percent."



Taubes believes current nutrition guidelines are not based on good science but rather observations that suggest hypotheses. He wants to go further by repeatedly proving or disproving hypotheses in hopes of finding real answers to the obesity problem.

Subscription info at journal.crossfit.com
Feedback to feedback@crossfit.com
Visit CrossFit.com



Science has yet to tell us what to eat to be healthy, and NuSI aims to correct that problem as soon as possible.

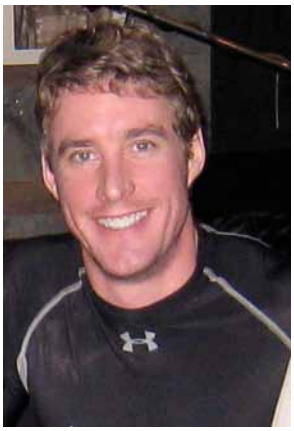
If Taubes and NuSI co-founder Attia are right, and if NuSI's research produces definitive nutrition guidelines that will reduce obesity and improve health, they could change the world.

The fight Taubes has picked is not unlike the battle waged against Big Tobacco in recent decades, in which generations of bad habits, a deep-pocketed agricultural industry lobby and even deeper-pocketed tobacco companies held the upper hand for years, even in the face of good science.

"Cigarettes are a good metaphor," Taubes said. "In the 1960s, half of Americans smoked, but over the course of 50 years, the opposition to smoking has worked."

What NuSI hopes to achieve is nothing short of a sociological upheaval in the way Americans understand nutrition, and by doing so Taubes and company hope to save millions of lives, improve the quality of life for millions more and ease the debt burden on a struggling U.S. economy by tens of billions of dollars a year.

"It would be a shift back to the way we saw nutrition 50 years ago," Taubes explained. "We know it can be done because it has been done before. If we are wrong, then we live with it, but let's do these experiments so that in 10 years we have nothing to argue about."



Courtesy of Marty Cej

About the Author

Marty Cej is a contributing editor to the ***CrossFit Journal*** *and the managing editor of Business News Network (BNN) in Toronto, Canada.*

Subscription info at journal.crossfit.com
Feedback to feedback@crossfit.com
Visit CrossFit.com