



How Carbs Became a Dietary Supervillain

By Sofia Pineda Ochoa, MD
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It seems everyone these days is worried about carbs. But is this concern justified?

Our culture is certainly not immune from nutritional confusion. For example, it's a popular (but incorrect) belief that dairy is needed for bone health, despite the fact it's most certainly not, and hasn't even been part of our species' diet for [most of human history](#).

With regard to carbs, people worry that eating them will lead to weight gain, or that they are simply unhealthy and must be avoided. Is that right, or is it another example of a popularly held but inaccurate idea?

Carbs: A Brief History

Some hundreds of millions of years ago, plants developed the ability to take energy from the sun (along with carbon dioxide and water) and make carbohydrates. The process, called photosynthesis, allowed plants to store energy in the form of carbohydrates.

This evolutionary step completely transformed the planet because it allowed the flourishing of organisms that lacked the ability for photosynthesis, since they were now able to obtain energy by eating carbohydrates in plants.

The human body, which does not have the ability to make food from the sun, also happens to use carbohydrates as [its main energy source](#). For example, our [brain](#) and [red blood cells](#) depend specifically on glucose (a carbohydrate) for normal functioning and energy.

Carbs also serve as an important energy reserve in the form of glycogen in our muscles and liver, allowing us to maintain [steady energy levels](#) and also to have energy for [sudden strenuous activities](#) (such as sprinting). Thus, carbohydrates enable the body to adapt to a diverse range of situations.

How, then, did we come to vilify carbs? Most plant foods are naturally high in carbohydrates, so if we shun carbs, we're shunning some of the healthiest foods that exist. We're also shunning our bodies' main source of

energy. So how did this all come about?

Throwing the Baby Out with the Bath Water

There's a world of difference between eating fruits, vegetables, and whole grains, and eating doughnuts, candy, and other processed foods.

In this vein, there's a kernel of truth in the low-carb message: Refined sugars, white bread, and other processed foods high in carbs are unhealthy. Indeed, they are. But it's not because they are high in carbs; it's because they are processed foods that have had all of their nutrients stripped out.

However, fruits and other plant foods that are naturally high in carbs (such as vegetables, whole grains, and legumes) contain fiber, phytonutrients, antioxidants, minerals, and vitamins that are critical for good health—from protecting our eyesight by helping prevent [macular degeneration](#) to helping fight infections and [cancer](#). Yet in the minds of many, these immensely healthy foods have been grouped with white bread and table sugar.

By telling people to avoid or significantly limit carbs in general, the low-carb movement has erased the crucial distinction between unprocessed and processed foods—creating an entirely new paradigm that goes against everything we know about nutrition and health.

Long-Term vs. Short-Term

If you eliminate carbohydrates from your diet and put your body into a state of ketosis, whereby it's forced to burn fat to make ketones for energy, it can lead to short-term weight loss. But keeping your body in a state of ketosis is [neither sustainable nor healthful](#), and it does not fulfill the [long-term promise](#) of effective weight loss. Indeed, observational population studies show that high-protein, high-fat diets are associated not only with [more health problems](#) but also obesity.

When looking at long-term and sustained weight loss without mandated exercise or calorie restriction, the most effective eating pattern has been shown to be a [whole-food, plant-based diet](#) (low in fat and high in

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unprocessed carbohydrates).

The Rise of Atkins

The low-carb idea first became well known in 1972 after [Dr. Robert Atkins](#) began publishing his *Diet Revolution* books, which sold more than 15 million copies and established the Atkins brand and marketing empire.

Atkins is considered the “father” of the low-carb movement. He pushed the remarkable idea that if people ate fat and protein and eliminated (or significantly minimized) carbs, they would be more slender and healthy. Calories were deemed unimportant, allowing people to embrace some of the unhealthiest foods while still following a “diet.”

It’s not hard to see the appeal of this movement, which persists to this day. Gluttony is permitted and encouraged, and people think they are sticking to a diet while loading up on fried chicken, butter, bacon, eggs, steak, and cheese.

The chair of Harvard’s Department of Nutrition said that the Atkins diet was “nonsense” and “dangerous.” The prestigious Medical Letter on Drugs and Therapeutics called the diet “unbalanced, unsound, and unsafe.” But no amount of criticism stopped the diet’s [popularity](#) and the newfound fear of carbs it perpetuated.

The Zone and Other Atkins Spin-Offs

Seeing how Atkins hit the financial jackpot, it didn’t take long for a slew of other “low-carb” spin-offs to follow suit.

In the 1990s, we saw the rise of the Zone Diet, which claimed to achieve both weight loss and “hormonal balance” with a so-called “40-30-30” approach, whereby you obtain a relatively low 40 percent of calories from carbs (so still low-carb), 30 percent from protein, and 30 percent from fat. The Protein Power diet was a high-protein/low-carb approach, with significant vitamin and mineral supplementation (perhaps to compensate for the deficiencies of avoiding high-carb fruits and vegetables).

The blood type diet was an even more unusual idea, where people with different blood types would follow

dramatically different diets (which is akin to someone recommending different diets based on different eye or hair colors—sounds curious enough, but [has no real science behind it](#)). Interestingly, it recommended a meat-free diet for those with blood type A but a meat-heavy low-carb diet for those with blood type O, which is the most common blood type in the U.S.

The 2000s produced even more low-carb variations. The [South Beach Diet](#) emphasized “leaner” meats, but still limited carbs to no more than 28 percent of daily calories. The Paleo diet, popularized by an exercise physiologist, is another “high-protein/high-fat/low-carb” diet, but with an emphasis on avoiding processed foods and dairy. It’s based on very subjective assumptions about hunter-gatherer life in Paleolithic times, with provocative and sweeping claims that animal foods comprised up to 75 percent of the human diet (despite [evidence to the contrary](#)), and that these questionable estimates should dictate what we eat today (despite being [at odds with mainstream medicine](#)).

These diets and their promoters have enjoyed immense commercial success. The author of *The South Beach Diet*, for example, has [sold more than 17 million books](#) and generated large revenues from online services and major licensing deals. The founder of the Paleo diet gained [a huge share of the weight-loss market](#), with cookbooks, Paleo-themed magazines, “Paleo-approved” protein bars, and other products.

These low-carb entrepreneurs tapped into something very powerful: people’s desperation to lose weight. But they have done so by introducing serious confusion about basic nutrition, to the detriment of people’s health.

The Real Skinny on Weight Loss

In short, low-carb/high-fat diets are not good strategies for sustainable or healthy weight management.

One reason is that it’s metabolically a lot easier for our bodies to use [carbs for energy](#), and to [store fat as fat](#). Certainly, if you’re eating too many calories in general, then carbs can and do get metabolized into fat. But it costs our bodies a large percentage of calories to do so: About [28 percent](#) of energy content of carbs is needed to convert them into fat.

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In addition, it's much harder to overeat whole plant foods that are naturally high in carbohydrates (such as fruits and vegetables) because they are typically less calorically dense than high-fat foods and come packaged with lots of [fiber](#), which provides satiety (i.e., you feel full before you eat too much). By contrast, high-fat/low-carb foods can easily trick our brains into overeating because they are more calorically dense and lack fiber.

A Lesson from History?

Low-carb advocates sometimes claim that we've tried limiting fat before and it didn't work—that it actually made Americans fatter. Specifically, they point to a [U.S. Senate report](#) published in 1977 that recommended increasing plant foods while cutting back on high-fat meat and dairy.

But the basis for this argument is simply not true.

First of all, the 1977 recommendations specified that no more than 30 percent of calories should come from fat—which is not “low-fat” by any measure. Second, even that modest recommendation was not followed by most Americans; instead, fat and calorie consumption [continued to increase](#).

A Better Lesson From History

It's no big surprise that Americans are not the healthiest population: We weren't in the 1970s and we still aren't today. So, who are the healthiest populations and how do they eat?

The [healthiest populations in the world](#) have thrived on carbohydrate-centric diets with corn, wheat, rice, or barley as the main staple, plus lots of vegetables and fruits. These populations are sometimes referred to as “[Blue Zones](#).”

One example is the Okinawans of Japan. Their [traditional diet](#) derived close to 85 percent of calories from carbohydrates, with about 60 percent of calories specifically coming from sweet potatoes.

This emphasis on whole unprocessed foods high in carbs served the Okinawans very well. They were not obese, had much lower rates of diseases that plague the West, and were the longest-living people on the planet until they changed their diets. Older Okinawans who continue their traditional way of eating are still among the oldest living people on the planet.

Increased Cardiovascular Risk

Those who follow a [low-carb diet](#) have been found to be 50 percent [more likely to die of cardiovascular disease](#) and 51 percent more likely to die from cerebrovascular disease.

Cardiovascular disease involves the hardening of the arteries and formation of cholesterol plaques in our vessels, which can cause blockages, blood clots, or tears in our vessels. The disease can manifest in the heart, as it often does; in the brain, where it causes strokes; or in other parts of the body. It's the world's leading cause of death, and [the only diet](#) that's been found to stop and reverse it is a whole-food, [plant-based vegan diet](#).

There are numerous factors that help explain the strong association between animal food consumption and cardiovascular risk. For example, eating animal foods in general (including poultry, eggs, dairy, and fish) results in our bodies' producing higher amounts of a substance called [trimethylamine N-oxide \(TMAO\)](#). TMAO directly injures the lining of our blood vessels and makes them prone to develop atherosclerosis.

That may be why cardiologist Dr. Kim Williams [vigorously promoted](#) a plant-based vegan diet during his tenure as president of the American College of Cardiology, and [once famously said](#), “There are two kinds of cardiologists, those who are vegan and those who have not read the evidence.”

Dr. Robert Atkins himself sadly had a history of congestive heart failure and a heart attack, according to a medical report that was [accidentally leaked](#) from the New York medical examiner's office following his death. His widow and the Atkins organization have always denied it.

It's worth noting that those following a low-carb diet were also found to be [35 percent more likely to die of cancer](#).

Takeaways

It is extremely important to eat a varied and large amount of whole plant foods every day, something that is exceedingly difficult (if not impossible) to do if you're displacing plant foods with animal foods in a misplaced effort to avoid carbs.

Yes, refined and processed foods (including processed

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carbs) are to be avoided. But don't replace them with meat, eggs, and cheese. Replace them with foods that actually promote good health, such as vegetables, fruits, legumes, whole grains, and, yes (gasp!), potatoes, sweet potatoes, and bananas, too.

It's easy to get the right proportions of nutrients (plus lots of antioxidants and phytonutrients that promote health and prevent disease) simply by eating a well-balanced and varied diet of whole plant foods. And, as no small added benefit, eating a plant-based vegan diet is also an effective and sustainable way to manage your weight.

Ready to get started? Check out [Forks Meal Planner](#), FOK's easy weekly meal-planning tool to keep you on a healthy plant-based path.