MERCOLA
Take Control of Your Health

Acclaimed Documentary Explores Global Health Consequences of Eating Too Much Sugar

Analysis by Dr. Joseph Mercola | December 14, 2023

STORY AT-A-GLANCE

- Our evolutionary history doesn't support a high-carb diet, yet the majority of foods we eat are loaded with added sugar
- On average, Americans consume about 23 teaspoons of sugar per day
- Sugar threatens to wipe out some of the oldest communities on Earth

Editor's Note: This article is a reprint. It was originally published June 3, 2017.

There is increasingly compelling research showing your biology is not optimized for a high-carb diet. Consuming excessive sugar just doesn't bode well for you. Yet the majority of foods eaten in the U.S. and around the world (including in some previously unaffected aborigine communities) contain significant amounts of sugar.

However, this has not always been the case. Historically — and as recently as the 20th century — sugar was viewed as a treat. It was a delicacy enjoyed only on occasion, such as with a cup of coffee or tea. Fast-forward to the 21st century and added sugar is found in just about everything we eat, including many non-junk food items such as pasta sauce, salad dressing, crackers, fruit juices, yogurt, energy drinks and many other foods.

Sugar Transitions From Sweet Treat to Every Day Habit

The adoption of a high sugar diet has caused public health worldwide to rapidly deteriorate, resulting in a host of chronic and potentially fatal diseases. Clever marketing tactics deployed by the food industry to boost sugary food sales are largely responsible for sugar overconsumption and the subsequent diseases it has caused.[1]

In 2015, U.S. Department of Agriculture data showed Americans consumed an average of 94 grams or 23.5 teaspoons of sugar per day.[2] In 1999, that number was even higher, with the average American consuming 111 grams or nearly 28 teaspoons of sugar daily. U.S. sugar consumption both then and now greatly exceeds the federal government's recommended limit of 50 grams or 12.5 teaspoons per day for an individual consuming 2,000 daily calories.

The Health Effects of Doubling Up on Sugar

The fact that Americans are eating about twice as much sugar as is recommended by health authorities — and nearly four times the amount suggested for optimal health — is great for Big Food, but what are the health implications of this unnatural trend?

In an effort to study the health effects of a high sugar diet, documentary filmmaker Damon Gameau, from "That Sugar Film," conducted an experiment during which he consumed the average amount of sugar eaten daily by Australians, which amounts to 160 grams or about 40 teaspoons.

It's important to note that before the experiment Gameau ate very little sugar. Surprisingly enough, Gameau didn't feast on junk food all day to reach his goal. Instead, he ate commonly sold processed foods, many of which are marketed as healthy, such as fruit juice, yogurt and energy drinks.

Initially, Gameau thought it would be difficult to reach his daily goal of 40 teaspoons but to his surprise found it disturbingly easy. The film shows Gameau nearly reaching his daily sugar goal in just one meal with a small bowl of cereal, yogurt and fruit juice. It wasn't long before Gameau began feeling both the physical and psychological effects of eating a high sugar diet. One of the first symptoms he noticed was wild mood swings.

After eating a sugary food, Gameau experienced what's known as the typical "sugar high," accompanied by short-lived feelings of alertness and even euphoria. His wife reported spontaneous and even manic-like bursts of laughter. But less than an hour later he would crash, noting severe feelings of lethargy. Gameau also reported feeling aloof, distracted and unable to concentrate at home — a trait his wife described as extremely uncharacteristic.

High Sugar Diet Wrecks Your Metabolism

Prior to the experiment, Gameau was in good health. A medical exam determined he was slightly healthier than the average western male in his age range. His diet consisted of about 2,300 calories per day, 50% of which was made up of healthy fats found in foods like nuts and avocado; 26% was derived from protein-based foods such as meat, eggs and fish, and the remaining 24% consisted of carbohydrates found in fresh vegetables.

Gameau weighed about 167 pounds and had a waist circumference of 33 inches (84 centimeters). Blood tests showed his liver was healthy and that he had low triglyceride levels (fat in the bloodstream) and no signs of insulin resistance or diabetes.

Gameau also kept up his exercise routine, which consisted of running three laps around his garden twice a week followed by a 10-minute workout in his home gym. But despite maintaining weekly exercise, Gameau's health quickly deteriorated.

After 12 days of ramping up his sugar intake, Gameau had gained almost seven pounds, the majority of which went straight to his abdomen. In a month of eating 40 teaspoons of sugar per day, he added 2.75 inches (7 centimeters) to his waistline. But the health effects were more serious than just weight gain.

Within three short weeks, doctors were shocked to find that Gameau was already displaying signs of fatty liver disease. "By the end, I'd developed pre-type 2 diabetes, I had heart disease, I had 11 centimeters of visceral fat. But the big one was, the non-

alcoholic fatty liver disease was almost in a full-blown state," said Gameau in a news article highlighting his film.[3]

How the Human Body Processes Sugar

In small amounts, sugar is typically harmless. As a carbohydrate, it helps supply you with the energy you need for your daily activities. All of your cells can use glucose. But at the same time, sugar is also calorie-rich, and once it is consumed in excess, negative health effects inevitably follow.

As noted in "That Sugar Film," sucrose or table sugar consists of 50% fructose and 50% glucose. Fructose used to be rare in nature and was only found in products such as honey and fruit; today however, highly processed fructose (typically from corn) is added to a large variety of food products.

Fructose, the simple sugar that is part of table sugar, has particularly pernicious effects. Your body actually processes fructose in the same way it processes alcohol, rapidly turning it into fat. This fat remains in your liver, increasing your risk of insulin resistance, nonalcoholic fatty liver disease (NAFLD) and diabetes. Once this fat is released into your bloodstream as triglycerides, it increases your risk for weight gain, blocked arteries and heart disease.

Why Too Much Sugar Stops the Fat-Burning Process

As Gameau points out in "That Sugar Film," when you eat a lot of sugar and net carbs, such as breads and pastas, your body responds by producing lots of glucose. Insulin is released when you eat sugar. The more glucose in your blood, the more insulin is released. What's important to realize is that while insulin is dealing with all the glucose, it tells your fat cells to hold onto fat and, as a result, your fat-burning processes actually shut down.

Fructose activates the enzyme fructokinase, which in turn activates another enzyme that causes cells to accumulate fat. Your body also has a hard time burning this fat off when

it's metabolizing excess sugar. This is what's happening to many people, says Gameau, who wonders whether many of today's obesity- and diabetes-related diseases — including cancer, gout, hypertension and possibly Alzheimer's — would exist if it were not for the widespread adoption of a high sugar diet.

Studies Link Sugar Addiction to Learning Disabilities in Schoolchildren

Mounting research suggests that massive sugar addiction is responsible for not only obesity and diabetes, but also heart damage and heart failure, cancer, depletion of brainpower and shorter lifespans.[4] As illustrated, consuming too much sugar can lead to detrimental effects to your health. I managed to count 76 ways in which the sweet treat can cause serious health problems.

As Gameau experienced, consuming excess sugar can cause behavioral changes including reduced learning capacity in children, depression, antisocial behavior and emotional instability. It may also induce cell death (as seen in Gameau's case) and lead to kidney stones, headaches, dizziness and gastrointestinal tract problems, among other health conditions.

New Sugar-Related Diseases Surface in Australia's Aborigine Communities

Sadly, the health effects of a high sugar diet have spread to remote communities, including Australia's aborigines. "That Sugar Film" follows Gameau to Amata, a small aborigine community located in South Australia that, despite being alcohol-free, has witnessed an uptick in fatty liver disease and early deaths linked to kidney failure.

John Tregenza, an aboriginal community development worker, says the introduction of a high sugar diet in Amata is to blame. In 1973, the people of Amata purchased about 10% of their food from local stores; today it's almost a 100%, he says. Tregenza reports

observing a direct correlation between the widespread availability of sugary junk foods in local stores and a steep decline in the community's health.

Amata, which has a population of about 400, had been consuming an astounding 40,000 liters of soft drink each year. The result? A graveyard full of preventable deaths. Gameau and Tregenza tour a local cemetery during which the social worker points out numerous graves of people he says suffered an early and unnecessary death.

"All those folks were under 40," says Tregenza, adding that their death could have been prevented with the correct diet and exercise. Sugar is in fact threatening to wipe out some of the oldest communities on Earth, concludes Gameau.

How to Limit Your Sugar Consumption

As previously stated, sugar, in its natural form, is not inherently damaging as long as it's consumed in moderation and you are able to burn fat as your primary fuel. It is best to avoid all sources of processed fructose, particularly processed foods and beverages like soda and fruit juice.

According to SugarScience.org, 74% of processed foods contain added sugar stealthily hidden under at least 61 different names.[5] Ideally, you would spend 90% of your food budget on whole foods and only 10% or less on processed foods. I also advise you to severely limit your consumption of refined carbohydrates and grains, as they actually break down to sugar in your body, which increases your insulin level and causes insulin resistance.

As a general recommendation, I advise keeping your total fructose consumption below 25 grams per day from all sources. Keep in mind that although fruits are rich in nutrients and antioxidants, they also naturally contain fructose, and if consumed in high amounts may actually worsen your insulin sensitivity and raise your uric acid levels.

You can view this previous article to see how much fructose is in the fruits you eat. Awareness is key in preventing unnecessary disease and death worldwide as a result of sugar. The better we understand what happens inside our minds and bodies when we

eat too much sugar, the sooner we can start making healthier choices and live a longer and fuller life.

Low-Carb, High-Fat Diet Helps Solve Many Health Problems

Having delved deep into the medical literature in preparation for my book, "Fat for Fuel," I believe a diet high in healthy fats with low net carbs and moderate amounts of protein will help you burn fat as your primary fuel, thereby improving your mitochondria and radically decrease your risk of disease.

Not only does it help you shed excess body fat, it does so while improving metabolism, boosting overall energy levels, lowering inflammation, promoting optimal health and maximizing longevity in a number of different ways. As a general guideline, to optimize your fat-burning system:

- Limit your net carbs (total carbs minus fiber) to a maximum of 30 to 40 grams per day. You can consume as many high-fiber veggies as you like. They're carbs, but since they're high in fiber, they're typically quite low in net carbs
- Limit protein to a maximum of 1 gram of protein per kilogram of lean body mass
- Increase healthy fats to 50% to 85% of your daily calories
- Once you achieve fat burning it is best to cycle in and out of it

Intermittent fasting will facilitate and speed up the process. Once your fat-burning ability has returned, (assuming you're still eating right), you only need to intermittently fast on a maintenance basis.

Sources and References

- [1] CNN April 17, 2017
- [2] CBS News September 20, 2016
- [3] ABC News Australia September 4, 2016
- [4] The Huffington Post Healthy Living. September 29, 2013
- [5] Sugarscience.org, 61 Names for Sugar