

# How Excess Sugar Affects Your Health

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It's difficult to avoid added sugars in your food. Seventy-four percent of packaged foods — including staples such as bread and ketchup — contain added sugars, often listed in the ingredients as sucrose, high-fructose corn syrup, dextrose, barley meal and rice syrup. [1] Even healthy-sounding foods, such as yogurt and whole-grain breakfast bars, can contain surprising amounts of sugar. [2]

According to the 2015-2020 Dietary Recommendations for Americans, fewer than 10 percent of daily calories should come from added sugars. [3] It is estimated, however, that seven out of 10 Americans age one and older eat more than the recommended amount of sugar each day. On average, an American eats the equivalent of 17 teaspoons of added sugar daily. [3, 4] Americans aren't alone. In Europe, sugar intake ranges from 7% of total energy intake to almost 25%, depending on age and country. [5]

When consumed, fructose (one type of sugar) is almost entirely metabolized by the liver. [6] Excessive fructose intake has been linked to increased fat production in the liver, risk of developing non-alcoholic fatty liver disease (NAFLD) and obesity – which can lead to a higher risk of developing Type 2 diabetes and cardiovascular disease. [7,8]

## Fatty Liver Disease

The connection between fructose and fatty liver goes back to ancient Rome, where chefs would make the delicacy *foie gras* by feeding geese diets heavy in dates, a rich source of fructose. [8] Today, scientists believe that high-sugar diets are contributing to the rise of NAFLD. [8] Non-Alcoholic Fatty Liver (NAFL) results when the liver accumulates fats due to mainly an increase in fat production and transfer of fat from the adipose tissue to the liver. NAFL can progress to non-alcoholic steatohepatitis (NASH), a condition characterized by high fat level, inflammation, and cell damage in the liver. [10] NASH is a silent disease, often progressing slowly with no

obvious outward symptoms. Without detection and intervention, severe and irreversible liver damage due to NASH may occur. [11]

## Obesity

Adding sugar to food and beverages makes them more calorie dense. [12] Each gram of sugar contains four calories. That doesn't sound like much, but it adds up. A typical can of soda, for instance, contains approximately 40–50 grams of added sugar, or 160–200 sugar-based calories. [13] In time, excess calories can lead to excess pounds.

## Type 2 Diabetes

In healthy individuals, the body secretes insulin in response to rising blood sugar levels. Insulin helps the body convert sugar to energy. In people with type 2 diabetes, the body isn't as responsive to insulin — a condition called insulin resistance. [14] Diets high in added sugars, specifically fructose, have been associated with reduced insulin sensitivity. [15]

## Cardiovascular Disease

High blood pressure and high triglyceride levels are more common in people whose diets contain a lot of added sugars. [16, 17] Increases in these levels is associated with higher risk of heart disease, heart attacks and stroke. [17, 18] In fact, one study found that people who took in 25 percent or more of their daily calories from sugar were more than twice as likely to die from heart disease as those whose diets included less than 10 percent added sugar. [19, 20, 21]

Cutting back on added sugars is one way you can protect your health. The small change may help you prevent disease and lead to improved, overall well-being.

### Sources

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[2] Ibid

[3] Ibid

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