This is what happens when you drink soda
March 28, 2013

SALT LAKE CITY — It’s no news flash that soda — diet or otherwise — is bad for health; even those who happily indulge in a can-a-day (or more) habit can rattle off at least two or three negative effects of soda consumption. But when it comes to the effects of soft drink consumption on the human body, the total picture is downright scary.

With high levels of sugar, acids, preservatives and other harmful ingredients, soda causes more damage to the body than just expanding the waistline. From stroke to kidney stones to dementia, here’s a look at what can happen to the body long-term for those who regularly drink soda.

Brain

A 2002 UCLA study found that consuming excessive amounts of sugar reduces the production of the brain chemical called brain-derived neurotrophic factor, or BDNF. “Without BDNF, our brains can’t form new memories and we can’t learn (or remember) much of anything,” according to an article in Forbes magazine.
Another study from the University of Copenhagen found that low BDNF levels are linked to depression and dementia. What’s more, when BDNF levels are reduced, the body begins to become resistant to insulin, which kicks off a cascade of other health problems.

But there’s a more immediate problem from consuming too many sweets: According to a 2010 study from the University of Minnesota, chronic sugar consumption dulls the brain’s mechanism for knowing when to stop eating.

**Teeth**

Sugar is not the only harmful substance in soda that affects dental health. A 2006 study published in the Academy of General Dentistry journal found that drinking soda is nearly as harmful for your teeth as drinking battery acid. That’s because soda actually contains acid (most commonly citric and/or phosphoric), which corrodes tooth enamel. And with a pH of 3.2, diet sodas are even more acidic than regular sodas.

According to the [Colgate Oral and Dental Health Resource Center](https://www.colgate.com/), soft drinks are among the most significant dietary sources of tooth decay. “Acids and acidic sugar byproducts in soft drinks soften tooth enamel, contributing to the formation of cavities. In extreme cases, softer enamel combined with improper brushing, grinding of the teeth or other conditions can lead to tooth loss.”

**Heart**

Recent research has shown a correlation between soda consumption and heart disease. Most recently, a 2012 Harvard study found that one daily 12-ounce serving of regular soda “was linked to a 19 percent increase in the relative risk of cardiovascular disease,” according to the [New York Times](https://www.nytimes.com/).

Some researchers say the blame can be placed on high fructose corn syrup, which has been linked to an increased risk of metabolic syndrome, a condition associated with an elevated heart disease risk.

However, others say diet sodas with artificial sweeteners are much worse on the heart. A study from the University of Miami found that those who had a daily diet soda habit had a 61 percent increased risk of “cardiovascular event,” including heart attack and stroke, than those who drank no soda — even when factors such as smoking, physical activity, alcohol consumption and diet were controlled.

**Lungs**

A recent study by the University of Adelaide found that drinking too much soda can increase the risk for developing asthma or chronic obstructive pulmonary disorder, or COPD. The more soda a person consumes, the greater the risk of developing those diseases. Other studies suggest sodium benzoate, a preservative in soda, may directly affect the lungs: It increases the amount of sodium in the body while reducing the availability of potassium, causing asthma as well as eczema.

**Bones**

Soda consumption has been linked in several studies to osteoporosis and bone density loss. While many suggest that those who regularly consume soft drinks — especially in large amounts — are not leaving enough room in their diets for healthier drinks, like milk and fortified juice, other studies say phosphoric acid may be to blame.

“Phosphorus itself is an important bone mineral,” writes Gina Shaw for [WebMD](https://www.webmd.com/), citing a study from Tufts University. “But if you're getting a disproportionate amount of phosphorus compared to the amount of calcium you're getting, that could lead to bone loss.”

Caffeine may also be the culprit, as it is known to interfere with calcium absorption.
**Kidneys**

The high levels of phosphoric acid in colas have been linked to kidney stones and other renal problems, but diet cola is most likely to have a negative effect on kidney function. In fact, diet cola is associated with a two-fold increased risk. According to a [Harvard study](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5497177/), kidney function in 3,000 women subjects started declining when they drank more than two sodas a day.

**Digestive system**

For those who have digestive issues to begin with, consuming soda will only add to their troubles. The carbonation in soft drinks can irritate the digestive system, particularly in those who have irritable bowel syndrome. Carbonation can cause a buildup of excess gas in the abdominal area, leading to bloating, cramping and pain. The caffeine in soda can also increase stomach acid production, worsen episodes of diarrhea, and contribute to constipation. In addition, the sweeteners used in soft drinks can worsen IBS symptoms due to their laxative effects.

**Weight**

Drinking just one soda a day equates to consuming 39 pounds of sugar per year, which is one of the main reasons that soda consumption is strongly linked to obesity. A [recent Harvard study](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4395915/) found that sugar-sweetened beverages are linked to more than 180,000 obesity-related deaths each year, which means that about one in every 100 deaths from obesity-related diseases is caused by drinking sugary beverages. An [additional Harvard study](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6355176/) concluded that regularly consuming drinks high in sugar interacts with the genes that affect weight, dramatically increasing a person’s risk for obesity.