

# More Reasons to Quit Using Any Artificial Sweeteners

Analysis by [Dr. Joseph Mercola](#)

✓ Fact Checked

June 21, 2023

## STORY AT-A-GLANCE

- › The World Health Organization (WHO) warned people not to consume aspartame (Equal), sucralose (Splenda) or other artificial sweeteners for weight control
- › According to WHO, artificial sweeteners don't offer any long-term benefit in reducing body fat in adults or children
- › A WHO systematic review also revealed "potential undesirable effects from long-term use" of artificial sweeteners, including "increased risk of type 2 diabetes, cardiovascular diseases, and mortality in adults"
- › Newborns from mothers who consumed a lot of sucralose during pregnancy experienced a number of negative metabolic and inflammatory effects
- › Other research linked aspartame consumption to anxiety and found the mental health changes were passed on to future generations

Thousands of popular foods and drinks are made artificially sweet with chemical sweeteners. Long claimed to be a healthy choice because they contain no calories or sugar, evidence continues to emerge that consuming artificial sweeteners is a good way to wreck your health.

It doesn't matter if you choose aspartame (Equal), sucralose (Splenda) or another artificial sweetener. Consuming these products is putting your health at risk, so much so that even the World Health Organization warned people not to consume them.

# WHO Warns Against Non-Sugar Sweeteners for Weight Loss

Diet foods and drinks are among the most common products that contain artificial sweeteners. Marketed as tools for weight loss, this deceptive practice lures people into thinking they're a smart way to shed extra pounds.

Yet, a systematic review and meta-analysis conducted by the World Health Organization revealed "there is no clear consensus on whether non-sugar sweeteners are effective for long-term weight loss or maintenance, or if they are linked to other long-term health effects at intakes within the ADI."<sup>1</sup>

In May 2023, WHO released a new guideline, advising not to use non-sugar sweeteners (NSS) for weight control because they don't offer any long-term benefit in reducing body fat in adults or children.<sup>2</sup>

What's more, the systematic review suggests "potential undesirable effects from long-term use of NSS, such as an increased risk of type 2 diabetes, cardiovascular diseases, and mortality in adults." In a news release, Francesco Branca, WHO director for nutrition and food safety, said:

*"Replacing free sugars with NSS does not help with weight control in the long term. People need to consider other ways to reduce free sugars intake, such as consuming food with naturally occurring sugars, like fruit, or unsweetened food and beverages. NSS are not essential dietary factors and have no nutritional value. People should reduce the sweetness of the diet altogether, starting early in life, to improve their health."*

The WHO guidance to avoid artificial sweeteners applies to all categories of the chemicals, including acesulfame K, aspartame, advantame, cyclamates, neotame, saccharin and sucralose. The systematic review and meta-analysis included 283 studies, which revealed artificial sweeteners are linked to an increased risk of:<sup>3</sup>

Obesity

Type 2 diabetes

---

---

High fasting glucose	All-cause mortality
Cardiovascular events	Death from cardiovascular disease
Stroke	High blood pressure
Bladder cancer	Preterm birth and possible adiposity in offspring later in life

---

According to the WHO study:

*"Mechanisms by which NSS as a class of molecules might exert effects that increase risk for obesity and certain NCDs [non-communicable diseases] have been reviewed extensively and include interaction with extra-oral taste receptors, possibly with alteration of the gut microbiome.*

*Because sugars and all known NSS presumably elicit sweet taste through the TAS1R heterodimeric sweet-taste receptor, which has been identified not just in the oral cavity but in other glucose-sensing tissues, it is not surprising that such a group of vastly different chemical entities could be responsible for similar effects on health."*

## **Reasons To Be Wary of Sucralose**

In the U.S., sucralose is the most commonly used artificial sweetener. It's found in more than 6,000 food products, including many diet beverages. When the U.S. Food and Drug Administration approved sucralose in 1998, none of the studies it reviewed involved humans.<sup>4</sup>

One of sucralose's key marketing claims has long been that it neither metabolizes nor bioaccumulates in the human body, thus making it a basically inert substance. In 2018, however, an animal study found sucralose was metabolized in the gastrointestinal tract and accumulated in fat tissue.

This was "not part of the original regulatory decision process for this agent and indicate that it now may be time to revisit the safety and regulatory status of this organochlorine artificial sweetener," the researchers wrote at the time.<sup>5</sup>

Based on these findings, consumer group U.S. Right to Know (USRTK) asked the Federal Trade Commission (FTC) to investigate whether sucralose's marketing claims are deceptive. According to USRTK:<sup>6</sup>

*"Sucralose is 600 times sweeter than sugar and itself contains no calories. Although it has been marketed as a healthy product that can help fend off obesity and diabetes, sucralose consumption has been linked to leukemia, weight gain, obesity, diabetes, liver inflammation, metabolic dysfunction and other illnesses."*

In 2022, a study published in *Microorganisms* also revealed that consuming sucralose — in "amounts, far lower than the suggested ADI"<sup>7</sup> — for just 10 weeks was enough to induce gut dysbiosis and altered glucose and insulin levels in healthy, young adults.

The bacteria most affected by sucralose appeared to belong primarily to the phylum Firmicutes, which are centrally involved in glucose and insulin metabolism. However, it doesn't end there. Animal studies suggest the sucralose-altered gut microbiome could be involved in inflammation of the gut and liver, as well as cancer.

Additionally, a new study published May 29, 2023, in the *Journal of Toxicology and Environmental Health* found that a chemical broken down in the body when you consume sucralose is genotoxic and breaks up your DNA.<sup>8</sup> The fat soluble compound, sucralose-6-acetate, is produced in your gut during digestion at a threshold exceeding the European Food Safety Authority's maximum allowance for a single sucralose-sweetened drink in one day.

In their abstract,<sup>9</sup> study authors noted the DNA-damaging implications of such toxicity: "Sucralose-6-acetate significantly increased the expression of genes associated with inflammation, oxidative stress and cancer ... Overall, the toxicological and

pharmacokinetic findings for sucralose-6-acetate raise significant health concerns regarding the safety and regulatory status of sucralose itself."

## **A Warning About Sucralose Intake During Pregnancy**

A 2023 study published in *Biomedicines* also raised red flags about consuming sucralose during pregnancy.<sup>10</sup> Animal studies have previously found that sucralose intake during pregnancy may increase the risk of weight gain, metabolic disturbances and low-grade systemic inflammation in offspring. The research team found similar effects in humans.

The study evaluated newborns from women who had heavy sucralose intake – defined as more than 36 milligrams (mg) of sucralose a day during pregnancy – or light sucralose ingestion, defined as less than 60 mg a week. Newborns from mothers with heavy sucralose intake experienced a number of negative metabolic and inflammatory effects compared to newborns of light intake women, including:

- Significant increases in birth weight and insulin
- Substantial increase in the percentage of inflammatory nonclassical monocytes
- Higher IL-1 beta and TNF-alpha with lower IL-10 expression

From 2000 to 2010, the consumption of artificial sweeteners increased 54% in adults and 200% in children. The researchers called for urgent investigation into the effects of artificial sweetener intake during pregnancy, which could significantly increase chronic disease burden in adulthood:

*"Together with numerous studies in animal models, present results expand on the notion that sucralose and other NNS [non-nutritive sweeteners] may act as obesogenic factors during fetal development, influencing the onset of obesity and metabolic disease in childhood.*

*We encourage other research teams to conduct prospective cohort studies to follow up on newborns intrauterinally exposed to sucralose across the years to*

*draw significant conclusions regarding the possible role of NNS in programming obesity and metabolic disease later in life.*

*The urgent need for additional investigation in this field is justified when considering that up to 50% of obese children become obese in adulthood with a 4-fold increased risk of developing chronic non-communicable diseases such as T2D."*

## **Is Aspartame Making You Anxious?**

Artificial sweeteners' detrimental effects aren't limited to the physical realm. Mental health effects have also been reported, including for aspartame. Approved by the FDA in 1981, aspartame can be found in close to 5,000 food and beverage products. Worldwide, 3,000 to 5,000 metric tons of aspartame are produced annually, and, like sucralose, it's widely consumed by adults, including pregnant women, and children.<sup>11</sup>

When you consume aspartame, it's broken down into aspartic acid, phenylalanine – a precursor of monoamine neurotransmitters – and methanol, which may have "potent" effects on your central nervous system, Florida State University (FSU) College of Medicine researchers noted.

Their study, published in PNAS, linked aspartame consumption to anxiety and found the mental health changes were passed on to future generations. The FDA's recommended maximum daily intake value for aspartame is 50 milligrams per kilogram.

The FSU study involved mice drinking water that contained aspartame at a dosage of approximately 15% of the FDA's maximum daily intake for humans. The dose was equivalent to a human drinking six to eight 8-ounce cans of diet soda daily.<sup>12</sup>

The mice consumed the aspartame-laced water for 12 weeks, which led to "robust, dose-dependent anxiety."<sup>13</sup> "It was such a robust anxiety-like trait that I don't think any of us were anticipating we would see," study author Sara Jones said. "It was completely unexpected. Usually you see subtle changes."<sup>14</sup>

The study came about after the research team looked at the transgenerational effects of nicotine, revealing epigenetic changes in sperm cells. Similar effects may be occurring from artificial sweeteners. Study co-author Pradeep Bhide, the Jim and Betty Ann Rodgers Eminent Scholar Chair of Developmental Neuroscience in the Department of Biomedical Sciences, explained:<sup>15</sup>

*"What this study is showing is we need to look back at the environmental factors, because what we see today is not only what's happening today, but what happened two generations ago and maybe even longer."*

Mice exposed to aspartame had changes in the expression of genes that regulate excitation-inhibition balance in the amygdala, a region of the brain involved in regulating anxiety and fear. The changes were also seen in up to two generations from the aspartame-exposed mice.<sup>16</sup>

## Aspartame Linked to Cancer, Weight Gain

There's no reason to consume aspartame if you value your health. Like sucralose, it's linked to a number of serious health problems, including:<sup>17</sup>

Cancer	Cardiovascular disease	Alzheimer's disease
Seizures	Stroke and dementia	Intestinal dysbiosis
Mood disorders	Headaches	Migraines

Adding insult to injury, since many people consume aspartame thinking it will help them "diet," it's also linked to weight gain, increased appetite and obesity-related diseases.

In a 2017 systematic review and meta-analysis<sup>18</sup> published in the Canadian Medical Association Journal, consuming artificial sweeteners was associated with increases in weight and waist circumference along with increased incidence of obesity, high blood pressure, metabolic syndrome, Type 2 diabetes and cardiovascular events.

Regarding cancer, a 2022 population-based cohort study published in PLOS Medicine, which involved 102,865 adults, revealed artificial sweeteners – especially aspartame and acesulfame-K – were associated with increased cancer risk, including breast cancer and obesity-related cancers.<sup>19</sup>

## Are You Ready to Ditch Artificial Sweeteners?

It's clear that artificial sweeteners have no place in a healthy diet. Fortunately, as you work to eliminate ultraprocessed foods from your meals, you'll naturally consume less artificial sweeteners, which are primarily found in products like diet drinks, desserts, candies, snacks and flavored yogurts. Be aware, however, that they're also hidden in condiments, salad dressing and medications, so you'll need to read labels to ensure you avoid them.

If cravings are stopping you from giving up these toxic sweeteners, the video above shows how to use the Emotional Freedom Techniques (EFT), a psychological acupressure tool, when you feel a craving coming on. It can help you overcome the urge to consume a poisonous artificial sweetener.

Other natural craving-busters include sour foods like fermented vegetables or water with lemon juice. When you feel the urge to eat something artificially sweet, grab a glass of water or tea with citrus juice added for a much healthier treat.

## Sources and References

---

- <sup>1</sup> WHO April 12, 2022
- <sup>2</sup> WHO May 15, 2023
- <sup>3</sup> WHO April 12, 2022, Executive Summary
- <sup>4, 6</sup> U.S. Right to Know May 30, 2023
- <sup>5</sup> Journal of Toxicology and Environmental Health, Part A. August 21, 2018
- <sup>7</sup> Microorganisms 2022, 10(2)
- <sup>8</sup> News Medical Life Sciences May 31, 2023
- <sup>9</sup> Journal of Toxicology and Environmental Health, Part B. May 29, 2023
- <sup>10</sup> Biomedicine 2023, 11(3), 650; doi: 10.3390/biomedicine11030650
- <sup>11, 16</sup> PNAS December 2, 2022, 119 (49) e2213120119



- <sup>12, 14, 15</sup> Florida State University News December 8, 2022
- <sup>13</sup> PNAS December 2, 2022, 119 (49) e2213120119, Intro
- <sup>17</sup> U.S. Right to Know May 15, 2023
- <sup>18</sup> CMAJ July 17, 2017 189 (28) E929-E939; doi: 10.1503/cmaj.161390, Results
- <sup>19</sup> PLOS Medicine March 24, 2022