

What exactly is aspartame and what's the controversy?

July 14 2023, by Kelly Yamanouchi



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An agency of The World Health Organization, The International Agency for Research on Cancer (IARC), has declared that the artificial sweetener aspartame is a possible human carcinogen.

This could have major implications for Atlanta-based Coca-Cola Co., which uses aspartame in some of its products including Diet Coke, Coke Zero Sugar and other diet and Zero beverages.

Coca-Cola says research shows aspartame "is safe for people to consume." So does the U.S. Food and Drug Administration.

So what exactly is aspartame and how has this controversy evolved?

Here's what you need to know.

What is aspartame?

Aspartame is a chemical sweetener that's about 200 times sweeter than sugar. It was introduced to replace sugar as a sweetener.

Aspartame is a dipeptide composed primarily of two amino acids—phenylalanine and aspartic acid. When they are combined to form aspartame, they produce an intensely sweet taste, according to the FDA.

What is aspartame in?

Aspartame is in sweeteners Equal, NutraSweet and Sugar Twin. It is used as a sweetener for soft drinks and other beverages, medicine, sugar-free gum and candy.

Aspartame is not heat stable so it typically isn't used in baked goods.

When was aspartame introduced?

Aspartame was discovered in 1965 by James M. Schlatter, who was

researching antiulcer drugs and "discovered the sweetness completely by accident, after licking it off his finger, against work safety regulations," according to a study on aspartame published in the journal *Nutrients*.

The FDA first issued a regulation for aspartame in 1974 for use as a tabletop sweetener and in chewing gum, cold breakfast cereals, and dry bases for certain foods including beverages, instant coffee and tea, gelatins, puddings and fillings, and dairy products and toppings.

Since that time, the FDA approved aspartame for other uses, including as a general-purpose sweetener in 1996.

When did the controversy over the safety of aspartame begin?

A series of investigative articles published by UPI in 1987 reported concerns about possible health effects of aspartame.

Researchers in 1996 published a study looking at brain tumor rates and [environmental factors](#) including aspartame, and concluded "that there is need for reassessing the carcinogenic potential of aspartame."

Numerous other studies over the years have looked at health effects of aspartame.

The FDA concluded that aspartame "is safe for the [general population](#) when made under [good manufacturing practices](#) and used under the approved conditions of use."

The American Cancer Society says the FDA's acceptable daily intake of aspartame is 500 mg per kilogram of body weight per day. The European Food Safety Authority recommended a lower threshold of 40

mg per kilogram of body weight per day, which would require an adult weighing 132 lbs to drink 12 cans of a diet [soft drink](#) with the maximum permitted level of aspartame, on a daily basis. The amount of aspartame in [soft drinks](#) "can be 3 to 6 times less than the maximum permitted levels," according to the American Cancer Society.

The American Beverage Association says, "For over four decades, the FDA has confirmed with six separate reviews that [aspartame](#) is safe for human consumption, most recently in 2021."

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