

Is it safe to consume more aspartame than the ADI?

Yes. Since the ADI has a built-in safety factor and represents a guideline for intake every day over a lifetime, occasional use of aspartame can be greater than the ADI without concern for safety. Tests with humans given much greater amounts of aspartame than the ADI have shown no adverse health effects.

Aspartame's ADI is the sweetness equivalence of consumption of about one and a half pounds of sugar per day by an adult. This amount of sweetness would be difficult for an individual to consume during one day, let alone every day over a lifetime.

Does aspartame cause adverse health effects?

No. The scientific evidence is overwhelming that aspartame is not linked to adverse health effects in people. The FDA has investigated all complaints, which some consumers related to consumption of products with aspartame, and noted a gradual decrease in such reports received over time. These reports reached a peak in 1985, when many were related to negative allegations about aspartame in the media. Extensive scientific research has demonstrated no adverse health effects from aspartame.

Does aspartame cause headaches?

No. A controlled clinical study done at Duke University Medical Center with people who were convinced that aspartame caused their headaches demonstrated that aspartame does not cause headaches or migraines.

Is aspartame safe for people with epilepsy?

Yes. The Epilepsy Institute, an organization devoted to people suffering from seizure-related problems, has concluded that aspartame is not related to seizures among epileptic patients. Scientific studies in people who were convinced that aspartame caused their seizures and in children with epilepsy demonstrated no association between aspartame and seizures.

Does aspartame have any effect on mood, behavior, or memory?

No. A number of scientific studies performed by experts at several well-known academic centers, including the Massachusetts Institute of Technology, Harvard Medical School, Tufts University Medical School, and the University of Illinois, have shown that aspartame has no effects on mood, behavior, or memory.

Has aspartame been found to affect children's behavior?

No. Numerous studies have shown that aspartame consumption does not affect the behavior of children, including those diagnosed as "hyperactive" or with Attention Deficit Disorder (ADD).

Does aspartame cause allergic reactions?

No. Studies investigating aspartame as a potential allergen have found no association between aspartame and allergic reactions. In double-blind, placebo-controlled studies with people who believed they developed allergic reactions after consuming aspartame, researchers found aspartame was no more likely than placebo to cause allergic reactions.

Is there any relationship between aspartame and cancer or tumor formation?

No. It is physiologically impossible for aspartame to cause cancer. Aspartame itself never enters the bloodstream; rather it is broken down in the gastrointestinal tract to small amounts of common dietary components including the amino acids, aspartic acid and phenylalanine, and methanol. We consume these same components in much greater amounts from common foods, such as milk, meat, fruits and vegetables. The body handles these components in the same way it handles them when derived from other food sources. In addition, long-term and lifetime tests in rats and mice with extremely large amounts of aspartame showed no evidence of brain tumors or any kind of cancer associated with aspartame.

Is there any truth to the negative information about aspartame on the Internet or in the media?

No. Allegations by a few individuals that aspartame may be associated with a myriad of ailments are not based on science and have come to be known as "urban myths." Unfounded claims about aspartame have been rejected by independent expert organizations, such as the National Multiple Sclerosis Society, the Alzheimer's Association, The National Parkinson Foundation, Inc., the Lupus Foundation of America, and the American Cancer Society.

The safety of aspartame has been documented time and time again and is supported by over three decades of research with over 200 scientific studies. Recently, several governments and expert scientific committees including the EU Scientific Committee on Food, the French Food Safety Authority, and Health Canada, carefully evaluated the Internet allegations and found them to be false, reconfirming the safety of aspartame.



Other resources available from the IFIC Foundation:

**IFIC Review:
Intense Sweeteners: Effects on Appetite
and Weight Management**



THE AMERICAN ACADEMY OF FAMILY PHYSICIANS FOUNDATION HAS FAVORABLY REVIEWED THIS MATERIAL THROUGH 2006. FAVORABLE REVIEW MEANS THAT MEDICAL INFORMATION IS ACCURATE, BUT DOES NOT IMPLY ENDORSEMENT OF ANY CONCLUSIONS PRESENTED.

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Everything You Need to Know About...

Aspartame



Aspartame is a low-calorie sweetener used in foods and beverages in more than 100 countries around the world. It is about 200 times sweeter than sugar. The calories in foods can be substantially reduced, and in some products eliminated, by using aspartame in place of sugar.

Aspartame was approved by the U.S. Food and Drug Administration (FDA) in 1981 for use in powdered mixes and in low-calorie tabletop sweeteners, followed by approval for use in carbonated beverages in 1983. In 1996, it was approved for use in all foods and beverages, including products such as syrups, salad dressings and certain snack foods where prior approval had not yet been obtained.

Prior to its approval, aspartame underwent one of the most thorough scientific reviews ever conducted, and regulators consider it one of the most widely tested ingredients in the food supply. The safety of aspartame has been affirmed by the FDA and leading independent health groups, such as the American Medical Association, the American Dietetic Association, and the American Diabetes Association.

The rapid growth and widespread use of aspartame in foods has led to much publicity, and with it, a variety of questions about this ingredient. Here are some of the most frequently asked questions about aspartame.

What is aspartame?

Aspartame is a low-calorie sweetener. It is used to sweeten many prepared foods, including beverages, yogurt, and pudding. Aspartame is also used in low-calorie tabletop sweeteners.

Why is aspartame used?

Aspartame is about 200 times sweeter than sugar, tastes like sugar, enhances citrus and other fruit flavors, saves calories and does not contribute to tooth decay.

Can aspartame be used in cooking or baking?

Yes. Aspartame can be used in a wide variety of recipes with great results. In recipes requiring lengthy heating or baking, some loss of sweetness may occur. Therefore, it is best to use low-calorie tabletop sweeteners with aspartame at the end of the cooking process or in specially suggested and tested recipes. If a food containing aspartame were heated for too long, it would still be safe but may simply not provide the desired sweetness.

How can foods and beverages sweetened with aspartame fit into a healthful diet?

According to the U.S. Government's "Dietary Guidelines for Americans", eating well and being physically active are keys to a healthful lifestyle. One of the guidelines states, "Choose beverages and foods to moderate your intake of sugars." As a sweetener, aspartame can reduce or replace the calories in foods and beverages while maintaining great taste, offering one simple step to help people move closer to achieving a more healthful diet. Simply substituting a can of diet soft drink for a regular soft drink saves about 150 calories; substituting a packet of low-calorie tabletop sweetener for two teaspoons of sugar three times daily (e.g., in coffee and tea and on cereal) saves about a 100 calories a day.

The following chart highlights potential calorie savings from products sweetened with aspartame versus their traditional counterparts.

Product	Traditional (kcal)	Aspartame-sweetened (kcal)
Carbonated beverage (12 oz.)	150	0
Low-calorie tabletop sweetener (equivalent to 2 tsp. of sugar)	32	0
Gelatin dessert (4 oz.)	80	10
Pudding (4 oz.)	160	80
Cheesecake (1/16)	220	158

Can aspartame be helpful in controlling body weight?

Yes. Considering that about two-thirds of Americans are overweight or obese, taking steps to assure appropriate caloric intake is important. Since aspartame-sweetened foods and beverages are lower in calories than their sugar-sweetened counterparts, such low- or reduced-calorie products, together with regular physical activity, can help with weight control. The results from a 3-year study at Harvard Medical School showed that aspartame is a valuable aid to a long-term weight management program that included diet and physical activity.

Is aspartame safe?

Yes. As a governmental agency charged with safeguarding the American food supply, the FDA has concluded that aspartame is safe for the general public, including diabetics, pregnant and nursing women, and children. People with a rare hereditary disease known as phenylketonuria (PKU), which is diagnosed at birth by a special blood test, must control their phenylalanine intake from all sources, including aspartame. Thus, products sweetened with aspartame carry a statement on the label that they contain phenylalanine.

How was aspartame tested before it was approved for use in foods?

Aspartame is one of the most thoroughly studied ingredients in the food supply. Prior to its approval by the FDA in 1981, aspartame's safety was documented in more than 100 scientific studies. These tests were conducted in laboratory animals and several human subpopulations, including healthy infants, children, and adults, lactating women, persons with diabetes, and obese individuals. Aspartame was tested in amounts many times higher than individuals could possibly consume in the diet. The results of these studies demonstrated that aspartame is safe and not associated with adverse health effects.

Have other regulatory bodies reviewed aspartame's safety?

Yes. Aspartame has been approved for use by more than 100 nations worldwide. It is used widely in major industrialized countries such as the U.S., Canada, the United Kingdom, Germany and Japan. Aspartame has also been reviewed and found safe by expert scientific committees, including the Joint Expert Committee on Food Additives (JECFA) of the United Nations Food and Agricultural Organization and World Health Organization as well as the Scientific Committee on Food of the European Union.

In detailed re-reviews of aspartame's safety in 2002 and 2003, health authorities in the European Union (EU), United Kingdom, France, and Canada reaffirmed aspartame's safety.

Have independent health organizations reviewed the safety of aspartame?

Yes. Health organizations, such as the American Medical Association's Council on Scientific Affairs, the American Diabetes Association, and the American Dietetic Association, have reviewed research on aspartame and found the sweetener to be safe.

How is aspartame handled in the body?

Upon digestion, aspartame breaks down into its components – the amino acids, aspartic acid and phenylalanine, and methanol – which are then absorbed into the blood. Aspartic acid and phenylalanine are building blocks of protein and are found naturally in all protein-containing foods, including meats, grains and dairy products. Methanol is also found naturally in many foods such as fruits and vegetables, and their juices. These components are used in the body in exactly the same ways as when they are also derived in much greater amounts from common foods and beverages. For example, a serving of non-fat milk provides about 6 times more phenylalanine and 13 times more aspartic acid than the same amount of beverage sweetened with aspartame; a serving of tomato juice provides about 6 times more methanol than the same amount of aspartame-sweetened beverage. Neither aspartame nor its components accumulates in the body over time.

Can children consume aspartame-containing products?

Yes. Scientific studies have shown that children handle aspartame the same way as adults. Studies in laboratory animals with extremely large doses of aspartame given from the prenatal period all the way to adulthood demonstrated no effects of aspartame on growth and development. Thus, aspartame can be safely incorporated as part of a healthful diet for children. However, it is important to keep in mind that children, particularly those under two years of age, need adequate calories for growth and development.

Can pregnant women consume aspartame?

Yes. A task force of the American Academy of Pediatrics' Committee on Nutrition concluded that aspartame is safe for both the mother and developing baby. Of course, it is important for all pregnant women to consult with their doctors regarding nutritional needs during pregnancy.

Can persons with diabetes consume aspartame?

Yes. The American Diabetes Association has stated that aspartame is acceptable as a sugar substitute for diabetics. Products sweetened with aspartame offer people with diabetes greater variety and flexibility in budgeting their total carbohydrate and caloric intake. People with diabetes are more likely to comply with a healthful meal plan when they are able to eat foods that they enjoy.

How much aspartame may people consume?

The FDA uses the concept of an Acceptable Daily Intake (ADI) for many food additives, including aspartame. The ADI represents an intake level that if maintained each day throughout a person's lifetime would be considered safe. The ADI for aspartame was set at 50 milligrams per kilogram (mg/kg) of body weight.

To reach the ADI, an adult would need to consume about 20 cans of diet soft drink, or 42 servings of sugar-free gelatin, or 97 packets of low-calorie tabletop sweetener, a level of consumption well above typical daily dietary intake.

How much aspartame are people actually consuming?

The amount of aspartame that Americans consume was carefully monitored through dietary surveys. Adults with high-level intakes of aspartame consume only about 6 percent of the ADI.

Because of children's small size, they consume proportionately larger amounts of all food ingredients than adults in relation to their body weight. Among children between the ages of 2 and 5, high-level intake of aspartame is only about 10 percent of the ADI.

