Sucrose intolerance

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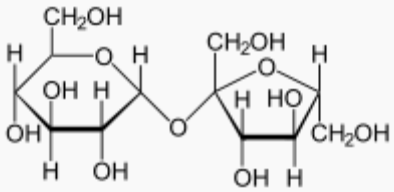
Sucrose intolerance	
Classification and external resources	
	
Sucrose	
ICD-10	E74.3
ICD-9	271.3
OMIM	222900
DiseasesDB	29844

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Sucrose intolerance, also called **congenital sucrase-isomaltase deficiency** (CSID)[1] or **Sucrase-isomaltase deficiency**,[2] is the condition in which sucrase, an enzyme needed for proper metabolism of sucrose (sugar), is not produced in the small intestine.

It is more common among the Inupiat.[3]

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Overview[edit source | editbeta]

Sucrose (also known as *saccharose*) is a disaccharide and is a two-sugar chain composed of glucose and fructose which are bonded together. A more familiar name is table, beet, or cane sugar. In most cases, sucrose intolerance is an autosomal recessive genetic metabolic disease, and involves deficiency in the enzyme sucrase, which breaks apart the glucose and fructose molecules. Monosaccharides, or single sugar units, are absorbed directly into the blood. However disaccharides are consumed, they must be broken down into monosaccharides by enzymes in the intestines before they can be absorbed. Sucrose can sometimes be found in the stool as an indication of an inability to digest and absorb sucrose in the body.

A deficiency of sucrase may result in malabsorption of sugar, which can lead to potentially serious symptoms. It is important for those with sucrose intolerance to minimize sucrose consumption as much as possible. Foods such as fruit and starch can help heal the body and reduce some symptoms.[*citation needed*] Supplements can be taken as a substitution of the enzyme missing or to introduce healthy bacteria into the immune system.

Sucrose Intolerance (*Congenital sucrase-isomaltase enzyme deficiency*) can be caused by genetic mutations (the common ones being *SI and SII*), in which both parents must contain this gene in order for the child to carry the disease. Sucrose intolerance can also be caused by irritable bowel syndrome, aging, or small intestine disease. There are specific tests used to determine sucrose intolerance. The most common tests are the sucrose breath test, genetic analysis or enzyme activity determination, which takes place in the small intestine.

Symptoms of Sucrose Intolerance[edit source | editbeta]

- Abdominal cramps and bloating
- Diarrhea and constipation
- Vomiting
- Hypoglycemia and headaches
- Poor weight gain and growth
- Upper respiratory tract and viral infections
- Anxiety and heart palpitations
- Excess gas production

See also[edit source | editbeta]

- Fructose malabsorption
- Gastroenterology
- Lactose intolerance
- Sucrase-isomaltase

References[edit source | editbeta]

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Fructose, dextrose, sucrose, brown sugar - cane sugar, white sugar from beets and corn syrup are sugars.

White sugar causes muscle weakness. Corn syrup may too. Brown sugar only slightly better. White sugar is refined with a poison, then the poison is extracted. There is always residue. All the little bits of residue may add up to too much for good health in a person over a life time. Brown sugar is refined also but by a different process.

White sugar is allergen for a few people. For those, it causes muscle and joint pain, body pain.

Corn syrup is an allergen for a few people because of corn allergies.

White, brown, & corn syrup are all empty calorie foods.

Fructose, dextrose, sucrose are found in fruits and vegetables.

dex·trose [dék str□ss]

Sugar in fruit and honey: a sugar produced during cellular metabolism in plant and animal tissue. It is found in many fruits, especially grapes, and is a major component of honey and corn syrup.

fruc·tose [frúk t□z] sugar in fruits and honey: a simple sugar found in fruits and honey.

a yellowish to white, crystalline, water-soluble, levorotatory ketose sugar, $C_6H_{12}O_6$, sweeter than sucrose, occurring in invert sugar, honey, and a great many fruits: used in foodstuffs and in medicine chiefly in solution as an intravenous nutrient

high-fructose corn syrup,

a sweetener made by processing corn syrup to increase the level of fructose, usually to between 42% and 55% of the total sugar, with the balance being glucose. It is used extensively as a sweetener in processed foods and soft drinks, particularly soda and baked goods, but it is included also in many foods not normally thought of as sweet foods.

The health hazard warning label on Sweet 'N Low packets has been removed, however, dangers may still lurk. According to the FDA, saccharin has been linked to bladder cancer in laboratory animals which prompted them to require warning labels on products containing this artificial sweetener in 1977. Further studies, such as the International Agency for Research on Cancer's *Monographs on the Evaluation of Carcinogenic Risks to Humans (1980*), noted that saccharin did not cause cancer in humans.

In 2001, the warning label requirement of the sweetener was removed. While it's reassuring to see studies proving the safety of this widely-used product, Sweet 'N Low dangers remain controversial.

Saccharin is the artificial sweetener that gives Sweet 'N Low its sweet taste. It contains no calories because it is not digested by the body. Saccharin has been around for over 100 years and has had its fair share of controversy. Up until 1972, saccharin was on the FDA's GRAS (Generally Recognized as Safe) list. From its initial listing as a potential carcinogen and its subsequent exoneration decades later to Internet myths and urban legends, saccharin and other artificial sweeteners continue to raise concerns.

- See more at: http://www.lifescript.com/diet-fitness/articles/archive/diet/eat-well/do_sweet_n_low_dangers_still_exist.aspx#sthash.f1bxDzB3.dpuf

Sucrose Ingredients

- Concentrated sugar beet juice or sugar cane are the main ingredients of sucrose. Glucose and fructose are also part of sucrose's nutritional makeup. Confectioner's sugar, brown sugar, granulated sugar and raw sugar all contain sucrose. Sucrose is the organic compound commonly known as table sugar and sometimes called saccharose. A white, odorless, crystalline powder with a sweet taste, it is best known for its role in food. The molecule is a disaccharide composed of the monosaccharides glucose and fructose with the molecular formula $C_{12}H_{22}O_{11}$. The word was formed in the mid-19th century from Latin *sucrum* = "sugar" and the chemical suffix *-ose*. The abbreviated term *Suc* is often used for *sucrose* in the literature

Since the 6th century BC, cane sugar producers have crushed the harvested vegetable material from sugarcane in order to collect and filter the juice. They then treat the liquid (often with lime (calcium oxide)) to remove impurities and then

neutralize it. Boiling the juice then allows the sediment to settle to the bottom for dredging out, while the scum rises to the surface for skimming off. In cooling, the liquid crystallizes, usually in the process of stirring, to produce sugar crystals. Centrifuges usually remove the uncrystallized syrup. The producers can then either sell the sugar product for use as is, or process it further to produce lighter grades. The later processing may take place in another factory in another country.

Sugarcane is a major component of Brazilian agriculture; the country is a top producer of sugarcane products, such as crystallized sugar and ethanol (ethanol fuel). The sucrose found in sugarcane produces ethanol when fermented and distilled. Brazil has implemented ethanol as an alternative fuel on a national scale.[20]

Beet[edit source | editbeta]

Sugar beets
Main article: Sugar beet

Beet sugar producers slice the washed beets, then extract the sugar with hot water in a "diffuser". An alkaline solution ("milk of lime" and carbon dioxide from the lime kiln) then serves to precipitate impurities (see carbonatation). After filtration[*clarification needed*], evaporation concentrates the juice to a content of about 70% solids, and controlled crystallisation extracts the sugar. A centrifuge removes the sugar crystals from the liquid, which gets recycled in the crystalliser stages. When economic constraints prevent the removal of more sugar, the manufacturer discards the remaining liquid, now known as molasses, or sells it on to producers of animal feed.

Sieving the resultant white sugar produces different grades for selling.

Cane versus beet[edit source | editbeta]

It is difficult to tell the difference between fully refined sugar produced from beet and cane. One way is by isotope analysis of carbon. Cane uses C4 carbon fixation, and beet C3 carbon fixation, resulting in a different ratio of ^{13}C and ^{12}C isotopes in the sucrose. Tests are used to detect fraudulent abuse of European Union subsidies or to aid in the detection of adulterated fruit juice.

Sugar cane tolerates hot climates better, but the production of sugar cane needs approximately four times as much water as the production of sugar beet, therefore some countries that traditionally produced cane sugar (such as Egypt) have built new beet sugar factories since about 2008. Some sugar factories process both sugar cane and sugar beets and extend their processing period in that way.

The production of sugar leaves residues that differ substantially depending on the raw materials used and on the place of production. While cane molasses is often used in food preparation, humans find molasses from sugar beets

unpalatable, and it consequently ends up mostly as industrial fermentation feedstock (for example in alcohol distilleries), or as animal feed. Once dried, either type of molasses can serve as fuel for burning.

Pure beet sugar is difficult to find, so labelled, in the marketplace. Although some brands label their product clearly as "pure cane sugar", beet sugar is almost always labeled simply as sugar or pure sugar. Interviews with the 5 major beet sugar-producing companies revealed that many store brands or "private label" sugar products are pure beet sugar. The lot code can be used to identify the company and the plant from which the sugar came, enabling beet sugar to be identified if the codes are known.[21]

Culinary sugars[edit source | editbeta]

Grainy raw sugar

Mill white[edit source | editbeta]

Mill white, also called **plantation white**, **crystal sugar**, or **superior sugar**, is raw sugar whitened by bleaching through exposure to sulfur dioxide rather than removing colored impurities. The most common form of sugar in sugarcane-growing areas, this product does not store or ship well; after a few weeks, its impurities tend to promote discoloration and clumping.

Blanco directo[edit source | editbeta]

Blanco directo, a white sugar common in India and other south Asian countries, is produced by precipitating many impurities out of cane juice using phosphoric acid and calcium hydroxide, similar to the carbonatation technique used in beet sugar refining. Blanco directo is more pure than mill white sugar, but less pure than white refined.

White refined[edit source | editbeta]

White refined is the most common form of sugar in North America and Europe. Refined sugar is made by dissolving and purifying raw sugar using phosphoric acid similar to the method used for blanco directo, a carbonatation process involving calcium hydroxide and carbon dioxide, or by various filtration strategies. It is then further purified by filtration through a bed of activated carbon or bone char. Beet sugar refineries produce refined white sugar directly without an intermediate raw stage[*clarification needed*].

White refined sugar is typically sold as ***granulated sugar,*** which has been dried to prevent clumping and comes in various crystal sizes for home and industrial use:

Granulated sugar for table use

- **Coarse-grain**, such as *sanding sugar* (also called "pearl sugar", "decorating sugar", *nibbed sugar* or *sugar nibs*) is a coarse grain sugar used to add sparkle and flavor atop baked goods and candies. Its large reflective crystals will not dissolve when subjected to heat.

- **Granulated**, familiar as table sugar, with a grain size about 0.5 mm across.[22] "Sugar cubes" are lumps for convenient consumption produced by mixing granulated sugar with sugar syrup.

- **Caster** (or *castor*[23]) (0.35 mm),[22] a very fine sugar in Britain, so-named because the grains are small enough to fit through a castor, a form of sieve. Commonly used in baking and mixed drinks, it is sold as **"superfine"** sugar in the United States. Because of its fineness it dissolves more quickly than regular white sugar and is thus especially useful in meringues and cold liquids. Castor sugar can be prepared at home by grinding granulated sugar for a couple of minutes in a food processor.

- **Powdered**, *10X sugar, confectioner's sugar* (0.060 mm), or *icing sugar* (0.024 mm), produced by grinding sugar to a fine powder. The manufacturer may add a small amount of anticaking agent to prevent clumping — either cornstarch (1% to 3%) or tri-calcium phosphate.

Brown sugar crystals

Brown comes from the late stages of sugar refining, when sugar forms fine crystals with significant molasses content, or from coating white refined sugar with a cane molasses syrup. Brown sugar's color and taste becomes stronger with increasing molasses content, as does its moisture-retaining properties. Brown sugars also tend to harden if exposed to the atmosphere, although proper handling can reverse this.

Measurement[edit source | editbeta]

Dissolved sugar content[edit source | editbeta]

Scientists and the sugar industry use degrees Brix (symbol °Bx), introduced by Adolf Brix, as units of measurement of the mass ratio of dissolved substance to water in a liquid. A 25 °Bx sucrose solution has 25 grams of sucrose per 100 grams of liquid; or, to put it another way, 25 grams of sucrose sugar and 75 grams of water exist in the 100 grams of solution.

The Brix degrees are measured using an infrared sensor. This measurement does not equate to Brix degrees from a density or refractive index measurement, because it will specifically measure dissolved sugar concentration instead of all dissolved solids. When using a refractometer, one should report the result as "refractometric dried substance" (RDS). One might speak of a liquid as having 20 °Bx RDS. This refers to a measure of percent by weight of *total* dried solids and, although not technically the same as Brix degrees determined through an infrared method, renders an accurate measurement of sucrose content, since sucrose in fact forms the majority of dried solids. The advent of in-line infrared Brix measurement sensors has made measuring the amount of dissolved sugar in products economical using a direct measurement.

Consumption[edit source | editbeta]

Main article: History of sugar

Refined sugar was a luxury before the 18th century. It became widely popular in 18th century, then graduated to becoming a necessary food in the 19th century. This evolution of taste and demand for sugar as an essential food ingredient unleashed major economic and social changes.[11] Eventually, table sugar became sufficiently cheap and common enough to influence standard cuisine and flavored drinks.

Sucrose forms a major element in confectionery and desserts. Cooks use it for sweetening — its fructose component, which has almost double the sweetness of glucose, makes sucrose distinctively sweet in comparison to other carbohydrate foods.[24] It can also act as a food preservative when used in sufficient concentrations. Sucrose is important to the structure of many foods, including biscuits and cookies, cakes and pies, candy, and ice cream and sorbets. It is a common ingredient in many processed and so-called "junk foods."

Metabolism of sucrose[edit source | editbeta]

Granulated sucrose

In humans and other mammals, sucrose is broken down into its constituent monosaccharides, glucose and fructose, by sucrase or isomaltase glycoside hydrolases, which are located in the membrane of the microvilli lining the duodenum.[25][26] The resulting glucose and fructose molecules are then rapidly absorbed into the bloodstream. In bacteria and some animals, sucrose is digested by the enzyme invertase.

Sucrose is an easily assimilated macronutrient that provides a quick source of energy, provoking a rapid rise in blood glucose upon ingestion. Sucrose, as a pure carbohydrate, has an energy content of 3.94 kilocalories per gram (or 17 kilojoules per gram).

Overconsumption of sucrose has been linked with adverse health effects.

Dental caries or tooth decay may be caused by oral bacteria converting sugars, including sucrose, from food into acids that attack tooth enamel.

When large amounts of refined food that contain high percentages of sucrose are consumed, beneficial nutrients can be displaced from the diet, which can contribute to an increased risk for chronic disease. The rapidity with which sucrose

raises blood glucose can cause problems for people suffering from defective glucose metabolism, such as persons with hypoglycemia or diabetes mellitus.

Sucrose can contribute to the development of metabolic syndrome.[27] In an experiment with rats that were fed a diet one-third of which was sucrose, the sucrose first elevated blood levels of triglycerides, which induced visceral fat and ultimately resulted in insulin resistance.[28] Another study found that rats fed sucrose-rich diets developed high triglycerides, hyperglycemia, and insulin resistance.[29] A 2004 study recommended that the consumption of sucrose-containing drinks should be limited due to the growing number of people with obesity and insulin resistance.[30]

Human health[edit source | editbeta]

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Human beings have long sought sugars, but aside from wild honey, have not had access to the large quantities that characterize the modern diet. Studies have indicated potential links between consumption of free sugars including sucrose (particularly prevalent in processed foods) and health hazards, including obesity and tooth decay.[31][32] It is also considered as a source of endogenous glycation processes.[*citation needed*]

Tooth decay[edit source | editbeta]

Tooth decay has become a prominent health hazard associated with the consumption of sugar. Oral bacteria such as *Streptococcus mutans* live in dental plaque and metabolize *any* sugars (not just sucrose, but also glucose, lactose, fructose, and cooked starches[33]) into lactic acid. The resultant lactic acid lowers the pH of the tooth's surface, stripping it of minerals in the process known as tooth decay.[34][35]

All 6-carbon sugars and disaccharides based on 6-carbon sugars can be converted by dental plaque bacteria into acid that demineralizes teeth, but sucrose may be uniquely useful to *Streptococcus mutans*.[36] Sucrose may be the sugar most efficiently converted to dextran, with which the bacteria glues itself to the tooth surface. Thus, sucrose could enable *Streptococcus mutans* to adhere more strongly and resist attempts at removal. The dextran itself also acts as a reserve food supply for the bacteria. Such a special role of sucrose in the formation of tooth decay is much more significant in light of the almost universal use of sucrose as the most desirable sweetening agent.

Glycemic index[edit source | editbeta]

Sucrose is a disaccharide made up of 50% glucose and 50% fructose and has a glycemic index of 65.[37] Sucrose is digested rapidly,[38][39] but has a relatively low glycemic index due to its content of fructose, which has a minimal effect on blood glucose.[38]

As with other sugars, sucrose is digested into its components via the enzyme sucrase to glucose (blood sugar) and fructose. The glucose component is transported into the blood (90%) and excess glucose is converted to temporary storage in the liver – named glycogen. The fructose is either bonded to cellulose and transported out the GI tract or processed by the liver into citrates, aldehydes, and, for the most part, lipid droplets (fat).[*citation needed*]

As the glycemic index measures the speed at which glucose is released into the bloodstream a refined sugar containing glucose is considered high-glycemic. As with other sugars, over-consumption may cause an increase in blood sugar levels from a normal 90 mg/dL to up over 150 mg/dL.[40] (5 mmol/l to over 8.3 mmol/l).

Diabetes mellitus[edit source | editbeta]

Diabetes mellitus, a disease that causes the body to metabolize sugar poorly, occurs when either:

1. the body attacks the cells producing insulin, the hormone that allows the metabolizing of sugar (Type 1 diabetes)
2. the body's cells exhibit impaired responses to insulin (Type 2 diabetes).

When glucose builds up in the bloodstream, it can cause two problems:

1. in the short term, cells become starved for energy because they do not have access to the glucose
2. in the long term, frequent glucose build-up increases the acidity of the blood, damaging many of the body's organs, including the eyes, kidneys, nerves, and/or heart.

Authorities advise diabetics to avoid sugar-rich foods to prevent adverse reactions.[41]

Obesity[edit source | editbeta]

The National Health and Nutrition Examination Survey I and their follow-on studies as part of a series indicate that the population in the United States has increased its proportion of energy consumption from carbohydrates and decreased its proportion from total fat while obesity has increased. This implies, along with the United Nations report cited below, that obesity may correlate better with sugar consumption than with fat consumption, and that reducing fat consumption while increasing sugar consumption actually increases the level of obesity. The following table summarizes this study (based on the proportion of energy intake from different food sources for US Adults 20–74 years old, as carried out by the U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics, Hyattsville, MD[42]):

Year	Sex	Carbohydrate	Fat	Protein	Obesity
1971	Male	42.4%	36.9%	16.5%	12.1%
1971	Female	45.4%	36.1%	16.9%	16.6%
2000	Male	49.0%	32.8%	15.5%	27.7%
2000	Female	51.6%	32.8%	15.1%	34.0%

Added sugar is not always evident in food products. While expected in desserts, candies, and soft drinks, it is also added to a wide range of non-sweet items such as potato chips, peanut butter, and soup.

A 2002 study conducted by the U.S. National Academy of Sciences concluded that, due to discrepancies in data from different studies, it could not set a tolerable upper intake level, since "there is no clear and consistent association between increased intakes of added sugars and BMI." However, it explains that this may be due to the underreporting of the consumption of added sugars. (BMI, or "body mass index," is a measure of weight and height used to estimate body fat.)[43]

Gout[edit source | editbeta]

The occurrence of gout is connected with an excess production of uric acid. A diet rich in sucrose may lead to gout as it raises the level of insulin, which prevents excretion of uric acid from the body. As the concentration of uric acid in the body increases, so does the concentration of uric acid in the joint liquid and beyond a critical concentration, the uric acid begins to precipitate into crystals. Researchers have implicated sugary drinks high in fructose in a surge in cases of gout.[44][45]

UN dietary recommendation[edit source | editbeta]

In 2003, four United Nations agencies (including the World Health Organization and the Food and Agriculture Organization) commissioned a report compiled by a panel of 30 international experts. The panel stated that the total of free sugars (all monosaccharides and disaccharides added to foods by manufacturers, cooks or consumers, plus sugars

naturally present in honey, syrups, and fruit juices) should not account for more than 10% of the energy intake of a healthy diet, while carbohydrates in total should represent between 55% and 75% of the energy intake.[46]

Ethical concerns[edit source | editbeta]

The sugar refining industry often uses bone char (calcinated animal bones) for decolorizing.[47][48] About 25% of sugar produced in the U.S. is processed using bone char as a filter, the remainder being processed with activated carbon. As bone char does not seem to remain in finished sugar, Jewish religious leaders consider sugar filtered through it to be pareve and therefore kosher. In contrast, Muslims consider filtered sugar to be haraam because the animals may have been improperly slaughtered or bone char may contain pork remains.[48]

Trade and economics[edit source | editbeta]

One of the most widely-traded commodities in the world throughout history, sugar accounts for around 2% of the global dry cargo market.[*citation needed*] International sugar prices show great volatility, ranging from around 3 to over 60 cents per pound in the past 50 years. About 100 of the world's 180 countries produce sugar from beet or cane, a few more refine raw sugar to produce white sugar, and all countries consume sugar. Consumption of sugar ranges from around 3 kilograms per person per annum in Ethiopia to around 40 kg/person/yr in Belgium.[*citation needed*] Consumption per capita rises with income per capita until it reaches a plateau of around 35 kg per person per year in middle income countries.

Many countries subsidize sugar production heavily. The European Union, the United States, Japan, and many developing countries subsidize domestic production and maintain high tariffs on imports. Sugar prices in these countries have often exceeded prices on the international market by up to three times; today, with world market sugar futures prices currently strong, such prices typically exceed world prices by two times.

World raw sugar price from 1960 to 2006

Within international trade bodies, especially in the World Trade Organization, the "G20" countries led by Brazil have long argued that, because these sugar markets in essence exclude cane sugar imports, the G20 sugar producers receive lower prices than they would under free trade. While both the European Union and United States maintain trade

agreements whereby certain developing and less developed countries (LDCs) can sell certain quantities of sugar into their markets, free of the usual import tariffs, countries outside these preferred trade régimes have complained that these arrangements violate the "most favoured nation" principle of international trade. This has led to numerous tariffs and levies in the past.

In 2004, the WTO sided with a group of cane sugar exporting nations (led by Brazil and Australia) and ruled the EU sugar-régime and the accompanying ACP-EU Sugar Protocol (whereby a group of African, Caribbean, and Pacific countries receive preferential access to the European sugar market) illegal.[49] In response to this and to other rulings of the WTO, and owing to internal pressures on the EU sugar-régime, the European Commission proposed on 22 June 2005 a radical reform of the EU sugar-régime, cutting prices by 39% and eliminating all EU sugar exports.[50] The African, Caribbean, Pacific and least developed country sugar exporters reacted with dismay to the EU sugar proposals.[51] On 25 November 2005, the Council of the EU agreed to cut EU sugar prices by 36% as from 2009. In 2007, it seemed[52] that the U.S. Sugar Program could become the next target for reform. However, some commentators expected heavy lobbying from the U.S. sugar industry, which donated $2.7 million to US House and US Senate incumbents in the 2006 US election, more than any other group of US food-growers.[53] Especially prominent lobbyists include The Fanjul Brothers, so-called "sugar barons" who made the single largest individual contributions of soft money to both the Democratic and Republican parties in the political system of the United States of America.[54][55]

Small quantities of sugar, especially specialty grades of sugar, reach the market as 'fair trade' commodities; the fair trade system produces and sells these products with the understanding that a larger-than-usual fraction of the revenue will support small farmers in the developing world. However, whilst the Fairtrade Foundation offers a premium of $60.00 per tonne to small farmers for sugar branded as "Fairtrade",[56] government schemes such the U.S. Sugar Program and the ACP Sugar Protocol offer premiums of around $400.00 per tonne above world market prices. However, the EU announced on 14 September 2007 that it had offered "to eliminate all duties and quotas on the import of sugar into the EU".[57]

The US Sugar Association has launched a campaign to promote sugar over artificial substitutes. The Association now aggressively challenges many common beliefs regarding negative side-effects of sugar consumption. The campaign aired a high-profile television commercial during the 2007 Primetime Emmy Awards on FOX Television. The Sugar Association uses the trademark tagline "Sugar: sweet by nature."[58]

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- Food Industry Sweetener

- Sucrose is a sweetener that works as a stabilizing agent in products like ice cream. Sucrose, according to Scott Hegenbart writer for "Dairy Foods,' "is a multifunctional ingredient. In ice cream, for example, it enhances flavor, contributes to smooth texture and modifies the freezing point in addition to adding sweetness to the finished product." While sucrose works well for the food industry, it should only be consumed in moderation to avoid side effects.

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Side Effects

- Sucrose can have some undesirable side effects when overly consumed. Eating foods that contain sucrose can lead to tooth decay, obesity, insulin resistance, elevated triglycerides, high blood pressure, hypoglycemia, yeast infections, inflammatory bowel disease and the hardening of the arteries. Consumption of sucrose in excessive amounts can cause the body to store the sucrose in the form of fat inside the organs, body and blood. This is the leading reason why overindulgence in sucrose makes people fat.

Metabolic Danger

- According to Dr. Jason Barker, N.D., author of the article "The Adverse Effects of Sucrose," "sucrose is the largest of the sugars and must actually be split in half, or metabolized before it contributes to the energy systems of the body. This metabolic process slows the rate at which sucrose enters the bloodstream." Sucrose also retains water as it enters the stomach and intestines, which can cause bloating, gas and diarrhea.

Junk Food

- Since sucrose works so well as a sweetening agent in the food industry, it is often the main ingredient in junk foods. Almost all store-bought cakes, cookies, ice creams and chocolates contain high amounts of sucrose. Sodas are also loaded with sucrose. That is what gives them their syrupy flavor. Junk foods and sodas can cause weight gain and sluggishness when consumed. These foods should be eaten only in moderation, if at all.