

ON TRACK WITH BARIX

Support to Keep You On Track With a Healthful Lifestyle

The Sweetener Debate

Learn to navigate the best choices in sugar substitutes

The average person eats 75 grams of added sugar each day—visualize 19 teaspoons, 6 tablespoons, or 2/5 of a cup. Keep in mind that this figure doesn't include the sugar that is naturally occurring in fruits, vegetables and dairy products—just all the sugar that has been added to foods and beverages. Easy to identify are the 40% of added sugar that comes from soft drinks or sweetened beverages, the 4% from cereals, and the 5% from cakes and cookies. A good quarter of the added sugars in our diets come from sources that are hidden—hidden in everyday prepared foods like ketchup, box mixes, salad dressing, peanut butter and canned fruits and vegetables. We need a keen eye to identify and limit these sources of sugar.

A high intake of added sugar is linked to an increased risk of obesity, heart disease, diabetes, and cancer. One simple change in our diets, cutting back on added sugar, has the potential to reduce disease risk and add years to our lives.

Where to start? Cutting out beverages with added sugars and obviously sweet foods is an easy place to start. We also need to reduce our intake of prepared foods or take the time to identify hidden sugars and find lower sugar alternatives. Then build a diet rich in a variety of fresh vegetables and fruits, low fat dairy products, lean meat/fish/poultry, legumes, and whole grains.

Those undergoing bariatric surgery have made a commitment to drastically reduce the added sugar in their diet and this dietary change alone will have a positive impact on their health. But what about the use of sugar substitutes—calorie free packets added to water bottles, sugar free creamer in coffee, sugar free popsicles, a cup of no-added-sugar hot cocoa, no-added-sugar pumpkin pie to celebrate Thanksgiving, and sugar free cheesecake at birthday time? The latest headlines would have you believe that sugar substitutes cause weight gain, diabetes, cancer, dementia and strokes; but what does the research tell us?

Weight Gain

A study released this July spurred headlines that diet drinks caused weight gain. The study asked people about their diet and then tracked their health for years. They found that those drinking diet drinks had gained more weight than those not drinking diet drinks. The theory is that sugar substitutes trigger sweetness receptors in the brain, setting the body up to receive a substantial calorie load. When the calories don't arrive, the body, looking for those calories, increases hunger, causing people to eat more and they gain weight.

Other studies don't support this theory, however. One study found that although people tend to gain weight over time, people gain less weight when drinking



diet drinks vs sugary beverages. Another found that people ate fewer calories when snacking on cream cheese sweetened with stevia and crackers than those whose cream cheese was sweetened with sugar. Those drinking diet beverages ate fewer desserts than those drinking water, found another study.

Could there be reasons other than drinking diet drinks cause weight gain for the association between drinking diet drinks and gaining weight in the July study? Perhaps people found themselves gaining weight (which does happen to most over time) and switched to diet drinks in an effort to lose weight?

Conclusion—the science tells us that there is strong evidence that drinking sugary drinks causes weight gain in children and adults and there is very weak evidence that diet drinks cause weight gain.

Diabetes

A very interesting study done in 2014 with mice found that sugar substitutes, especially saccharin, may alter gut microbes impairing glucose tolerance, leading to the development of diabetes. Other long term studies didn't find an associate between drinking diet drinks and the development of diabetes.

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Conclusion—there is not enough evidence to determine if sugar substitutes have a positive, negative or neutral impact on glucose tolerance.

Cancer

In studies done on mice, aspartame, sucralose, saccharin, and acesulfame potassium caused a higher incidence of cancer. Studies in humans are challenging because it can take decades for cancers to develop and be diagnosed. One 20-year human study found that men (but not women) who drank at least one diet soda a day had a slightly higher risk of multiple myeloma and non-Hodgkin lymphoma.

Conclusion—there is strong evidence that aspartame, sucralose, saccharin, and acesulfame potassium cause cancer in mice. Many scientists believe there is a good correlation between the cancer risk of these ingredients in mice and humans.

Dementia

In the Framingham Heart Study, participants who drank at least one diet drink a day were almost 3 times more likely to suffer from dementia than those who drank none. But when other variables (blood pressure, cholesterol, diabetes, etc.) were taken into consideration, the increased risk was no longer there.

Conclusion—there is weak evidence that sugar substitutes lead to dementia.

Stroke

A 10-year study of men and women ages 45 and older tracked what kinds of beverages the subjects were drinking and then monitored their health. It found that those who drank one or more diet drinks a day had a risk of stroke that was three times higher than those who drank less than 1 diet drink a week. It's important to realize that the association between diet drinks and stroke isn't cause and effect. There may be other reasons why people who drank diet soda were more likely to have a stroke—perhaps they were diagnosed with cardiovascular disease and switched from regular to diet drinks in an attempt to lose weight.

Conclusion—there is weak evidence that sugar substitutes lead to stroke.

Unfortunately, the media, in an effort to grab attention through headlines, often misleads the public about the true importance of study findings. The danger in this constant bombardment of conflicting and hyped information is that people, not knowing the right thing to do, may simply give up on making healthy changes to their diet. But making healthy food choices can have a positive impact on health; so it is important that people, especially those who have undergone weight loss surgery, strive to eat a healthy diet. Choosing sugar substitutes can be part of that healthy diet.

Research tells us that sugar substitutes are not equal when it comes to safety. What ends up in our food is most likely based on the acceptable taste of the finished product and the cost to produce the product, not the potential health risks to individuals. After all, the FDA has approved all the sweeteners we find in our food supply as being safe for human consumption.

As an individual, selecting healthy foods and beverages for yourself and your family, you may want to be more discerning. Although it sounds easy enough, read the labels and discard any options that contain potentially toxic sweeteners; many of our favorite drinks and foods contain these ingredients. For example, Jello gelatin contains aspartame and Crystal Light is sweetened mostly with aspartame. It's best to focus on the sweeteners in the beverages you choose and foods that you eat on a regular basis. It's unlikely that you'll be able to avoid all of the potentially toxic sweeteners in our food supply, but you can cut back drastically by putting your focus into these areas.

Here's how the individual sugar substitutes stack up.

Stevia, found in Equal Naturals, Pure Via, Splenda Naturals, Stevia in the Raw, SweetLeaf, and Truvia may have a slight-

ly bitter aftertaste, but appear to be safe to consume.

Erythritol found in Equal Naturals, Splenda Naturals, Swerve, Truvia, and Wholesome Zero is an underutilized gem in the world of sugar substitutes. You may have the best luck finding this product online. It bakes well and tastes like sugar and appears to be safe for consumption. Although it is a sugar alcohol, it has fewer of the gastro-intestinal side effects found with most sugar alcohols.

Sugar Alcohols known by the names hydrogenated starch hydrolysate, Isomalt, Lactitol, Maltitol, Mannitol, Sorbitol, and Xylitol appear to be safe in moderate amounts. Larger amounts can cause the gastro-intestinal side effects of gas, cramping and diarrhea. Sugar alcohols are found in many sugar free products including candy, protein bars, and ice cream. Limit to 7 grams per day until you are able to establish your personal tolerance level.

Acesulfame Potassium is found in Equal Original and Equal Spoonful and many processed foods and should be used with caution or avoided because it may cause cancer in animals.

Aspartame is found in Equal Original, Equal Spoonful, and NutraSweet and many processed foods. It is the most widely studied sweetener and should be used with caution or avoided because it may cause cancer in animals.

Saccharin is found in Sugar Twin and Sweet'N Low and many processed foods and should be used with caution or avoided because it may cause cancer in animals.

Sucralose is found in Spenda and many processed foods and should be used with caution or avoided because it may cause cancer in animals.

Check your favorite beverage to see what it is sweetened with. If you find one of the use with caution or avoid sweeteners, consider making your own version. Here are a few ideas to get you started.

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Recipes

Fruit Punch

4 tea bags fruit flavored
decaffeinated tea
4 cups boiling water
4 cups cold water
Flavored or plain liquid stevia or
other sweetener to taste

Place tea bags in a large mason jar or
other heat resistant container. Pour
hot water over tea bags and steep
for 15 minutes. Remove tea bags and
add cold water and sweetener. Stir
and refrigerate. Makes 8 servings.

Nutrition information per serving: 0
calories, 0 grams protein, 0 grams fat,
0 grams carbohydrate, 0 mg sodium.

Green Tea Lemonade

5 cups brewed green tea
3 cups water
Juice from 4 small lemons or 1/3 cup of
lemon juice
15 drops of liquid stevia or other
sweetener
Ice cubes

Brew tea according to instructions.
Refrigerate to cool. Pour brewed
green tea in a large pitcher and stir
in water, lemon juice and stevia. Add
ice cubes and serve. **Optional:** add
lemon slices to garnish. Makes 8
servings.

Nutrition Information Per Serving: 2
calories, 0 grams protein, 0 grams fat,
1 gram carbohydrate, 0 mg sodium.



Hot Apple Cider

2 bags Celestial Seasonings
Cinnamon Apple Spice tea
1 lemon wedge, juiced or 1
teaspoon lemon juice
sweetener to taste
8 oz water
1 cinnamon stick (optional)

Boil water and pour over 2 tea bags.
Steep for a few minutes and then
add sweetener and lemon juice.
Stir with cinnamon stick if desired.
Makes 1 serving.

Alpine Hot Spiced Cider is a
wonderful drink to sip on a cool
evening, but it's sweetened with
aspartame. This is an easy-to-
prepare substitute that puts you in
control of the sweetener you would
like to use. Tastes great with liquid
stevia or erythritol.

Nutrition information per serving: 1
calorie, 0 grams protein, 0 grams fat,
0 grams carbohydrate, 0 mg sodium.

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