



Toothy facts about what you eat

Eating too much sugar can result in tooth decay. However, what actually causes cavities is acids. There are more than 300 species of bacteria present in the mouth and some of these bacteria feed on sugar and produce acids that gradually erode or dissolve tooth enamel.

Dentists call this demineralization because acids cause a loss of minerals (especially calcium) from the teeth. Our teeth are constantly taking up and releasing minerals. When the loss of minerals is greater than the gain, it leads to cavities.

The worst bacteria are the ones that cling to the tooth surface, forming dental plaque. When we feed them often with sweet treats, they grow more rapidly and produce more acids that dissolve tooth enamel. Plaque forms and grows on the tooth surface especially at or below the gum line. It provides the perfect real estate for long-term residence by bacteria, including acid producers.

Most of the bacterial plaque occurs in or on parts of the teeth that are inaccessible to a toothbrush. So, don't think that you can eat sugar all the time as long as you brush regularly. Some researchers

on dental health say the main benefit of tooth brushing is regular fluoride application to the teeth from toothpaste. In Hawaii, where we have very little fluoride in our water, this is even more important.

Bacteria thrive on various forms of carbohydrate that dentists and nutritionists refer to as fermentable carbohydrates. These include the usual sugars like white sugar, brown sugar, honey, syrups, etc. Some of these sugars appear on food labels as sucrose, glucose, fructose, lactose (milk sugar), maltose, corn syrup, molasses, etc. Starch is another form of fermentable carbohydrate, which an enzyme in the mouth gradually breaks down into a sugar that the bacteria can use.

Some sugary or starchy foods are sticky and tend to cling around the teeth longer than others. This gives the bacteria more time to eat and to produce acids. Some of the classic sticky tooth offenders include caramel and toffee candies.

Dried fruits also can be tooth offenders. Although nutritionally superior to candy, many dried fruits are high in fermentable sugars and stick to the teeth quite well. This can eventually leave the teeth in sad shape.

Obviously, the more often and the longer fermentable sugars are in the mouth, the more acids are produced by bacteria and the more tooth enamel is dissolved. Some people will say that it is better to graze than to eat specific meals. There are some reasonable arguments for this, but dental health is not one of them. If you are a grazer, get into the habit of flushing your mouth out with water after snacks and consider brushing or flossing after sticky snacks.

Acidic foods and drinks can also erode teeth. These include many citrus fruits and snacks like gummy bears, sodas, and sports drinks that contain acids like citric acid.

Some foods can be protective against sugary and acidic foods. These include high-fiber vegetables, fresh fruits, and whole grains. These require more chewing and therefore increase flushing of the mouth with saliva. High protein foods also protect teeth by neutralizing the acids. High calcium foods neutralize acids and also provide more calcium for tooth enamel. And drinking water can help to decrease the bacteria in the mouth by diluting sugars and acids and removing them.

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