

A quiz to get your teeth into

What you eat and drink is a big factor in the health of your teeth and gums. Your mouth naturally teems with bacteria. The ones in dental plaque (a film on your teeth containing bacteria) are the chief element in producing tooth decay, gingivitis, and periodontal disease. In fact, tooth decay, known as dental caries, is classified as an infectious disease. Tooth enamel is constantly losing and regaining minerals. Your own saliva, which contains minerals and other chemicals, promotes remineralization. Sugars (any kind – white or brown, honey, molasses, fructose) are changed into acids in the mouth, producing an environment in which bacteria demineralize or erode the teeth permanently. Tooth decay is uncommon among those who eat no sugar.

Your diet affects your teeth and gums globally – that is, by supplying the nutrients your body, including your teeth, need. But perhaps the most important effects happen locally – in the mouth before you even swallow.

See how well you do on the following quiz. Some questions have more than one correct answer.

1. Which of these foods/beverages are most harmful to tooth enamel?
(a) sodas with sugar (b) sugary baked goods (c) fruit, such as oranges (d) chocolate candy (e) regular cough drops.
2. Rates of tooth decay have fallen dramatically over the past 25 years in the U.S. and other developed countries. The reasons are
(a) fluoridation of water (b) fluoridated toothpastes (c) reduced consumption of sugary snacks and soft drinks (d) better and more regular dental care for more people.
3. True or false: If you want to avoid cavities, don't chew gum.
4. Chewing promotes saliva production, which in turn
(a) helps teeth absorb calcium into the tooth surface (b) acts as a lubricant and keeps foods from sticking to teeth (c) aids in clearing foods from the mouth.
5. True or false: Diet sodas are harmless for teeth.
6. True or false: Tap water is better for your teeth than bottled.
7. Which of the following help prevent cavities?
(a) chicken breast and other meats (b) fruits and vegetables (c) yogurt and other dairy products (d) tea, coffee and unsweetened chocolate.
8. If you've eaten dried fruit, hard candy, or other sugary items that stick to your teeth, and it isn't convenient to brush, you can counteract the effects by
(a) chewing sugar-free gum (b) rinsing your mouth with water (c) eating a small piece of cheese.
9. Many vitamins and minerals help keep teeth healthy, and the most important are
(a) vitamin D (b) B vitamins (c) vitamin C (d) magnesium (e) calcium.

Bonus Question

Starchy foods, such as potatoes, are (a) as likely to cause tooth decay as sugar because starch turns to sugar in the mouth (b) less likely to cause decay than sugar because you swallow them quickly and they contain minerals that protect tooth enamel.

Answers

1. (a) (b) (d) (e) Fruit is not a major promoter of cavities. Unsweetened chocolate has some chemicals that may protect teeth, but the effects are offset by the sugar. Cough drops are simply hard candy.
2. (a) (b) (d) Sugar consumption has gone up, not down, but other factors work against this. One strong factor is fluoride, which protects teeth as a component of toothpaste or drinking water; another is good dental care. Still another is education: People who are well-informed about health are more likely to take better care of their teeth.
3. False. As long as it's sugar-free gum, which can help prevent tooth decay because it promotes saliva production. Xylitol, a sweetener used in some sugar-free gums, has additional protective effects against mouth acids. But it's the saliva that's most helpful, rather than any ingredient in the chewing gum.
4. (a) (b) (c) Saliva is a vital element in dental health. In addition to its lubricating and cleansing properties, it helps tooth enamel remineralize – that is, absorb calcium and other minerals that strengthen teeth. It also has antibacterial activity.
5. False. But they are not as bad as soda with sugar. All sodas are acidic and thus tend to break down tooth enamel. Even citrus juices can have this effect. But diet soda doesn't promote the growth of bacteria. If your teeth are in good shape and you take care of them, diet soda in moderation should not be a problem.
6. True. If the tap water is fluoridated. Bottled water has no fluoride – a mineral known to protect against cavities.
7. (b) (c) (d) A diet high in fruits, vegetables, and whole grains is good for teeth as well as general health. New evidence suggests that certain plant chemicals in them, known as polyphenols, play a key role in reducing tooth decay and may also be protective against oral cancer. Tea, coffee, and cocoa powder also contain polyphenols. Tea contains fluoride – another plus. Yogurt and other dairy products are rich in calcium and other nutrients good for teeth. Chicken breast and other meats are not protective, but they do not promote decay.
8. (a) (b) (c) Any of these will help.
9. (a) (e) Vitamin D and calcium are the stand-outs. But in fact, vitamin C, B vitamins, phosphorus and other nutrients are important too. Vitamin D and calcium protect against not only bone loss but also tooth loss. Nutrients that help bones help teeth.

Bonus question (b) It's true that starch (complex carbohydrates) does partly convert to sugar in the mouth, but potatoes and similar foods are swallowed quickly and are unlikely to promote decay. However, starchy sweets, like cookies and cake, tend to stick to the teeth and are more likely to cause decay.

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