

THE INFLUENCE OF FOOD IN DENTAL HEALTH

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Abstract.

Dental health refers to all aspects of the health and functioning of our mouth especially the teeth and gums. Apart from working properly to enable us to eat, speak, laugh (look nice), teeth and gums should be free from infection, which can cause dental caries, inflammation of gums, tooth loss and bad breath. As a beginning of gastrointestinal tract, the mouth starts the digestive system's functions, so it is not surprising that nutrition and oral health are closely linked. Good nutrition promotes maintenance of the mouth and teeth by mitigating the negative influences of the food on teeth, where can plaque accumulate.

Keywords: dental health, food, oral health

INTRODUCTION

Teeth play a crucial role in our overall health and well being. Healthy teeth make it possible for us to chew thoroughly, which is important for digestion, and also allow us speak clearly. Oral health should be a priority from birth. By developing wholesome habits from the time you are young, you can enjoy a life-long healthy smile.

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What we eat contributes to your dental health. Cheese, milk, nuts, chicken and other meats are good because they help restore lost two important minerals found in teeth: calcium and phosphorus. Munching on celery sticks, carrots or apples after meals helps clear loose food particles.

Oral bacteria feed on carbohydrates, including sugars, therefore avoid snack foods like potato chips and french fries, as well as sweets such as cake, candy and soft drinks. Acidic foods like oranges and lemons should also be eaten sparingly because the acid wears away enamel, the substance that coats and protects teeth.

To prevent cavities and maintain good oral health, our diet -what we eat and how often you eat - are important factors. Changes in our mouth start the minute we eat certain foods. Bacteria in the mouth convert sugars from the foods you eat to acids, and it's the acids that begin to attack the enamel on teeth, starting the decay process. The more often we eat and

snack, the more frequently you are exposing your teeth to the cycle of decay.

RESULTS AND DISCUSSIONS

The best food choices for the health of mouth include cheeses, chicken or other meats, nuts and milk. These foods are thought to protect tooth enamel by providing the calcium and phosphorus needed to remineralize teeth (a natural process by which minerals are redeposited in tooth enamel after being removed by acids).

Milk and cheese

Calcium is vital in childhood and through your teens, when teeth are formed, but the value of this nutrient doesn't stop once we get our wisdom teeth. A diet with adequate calcium may prevent against tooth decay, says Dr. Leonard Anglis, DDS. When a diet is low in calcium, the body leeches the mineral from teeth and bones, which can increase the risk of tooth decay and the incidence of cavities. A study that appeared in the *Journal of Periodontology* found that those who have a calcium intake of less than 500 mg, or about half the recommended dietary allowance, were almost twice as likely to have periodontitis, or gum disease, than those who had the recommended intake.

Cows' milk contains the sugar lactose - the least cariogenic (decay-causing) sugar. Milk on its own doesn't promote caries and this has been attributed to the presence of protective factors: calcium, phosphate, and the milk protein casein.

Cheese protects against dental caries, partly because eating cheese causes more saliva to flow and neutralise acids, and partly because the cheese increases calcium concentration in the plaque stopping demineralisation. The fat in cheese also reduces the amount of bacteria on the surface of the teeth. So a small lump of cheese eaten after a meal or a sugary/acidic drink will help protect tooth enamel.

Milk chocolate contains calcium and casein that help protect teeth as milk would. There's a protective factor in cocoa itself, but these protective factors are unlikely to override the detrimental effect on teeth of the high sugar content.

Vitamin C

The body needs vitamin C to repair connective tissue and help the body fight off infection. No surprise then that a study at the State University of New York at Buffalo showed that those who eat less than the

recommended 75 to 90 mg per day are 25 percent more likely to have gingivitis than those who eat three times the recommended daily allowance. Gingivitis is the mildest form of periodontal diseases, and it causes the gums to become red from inflammation, swelling and bleeding easily.

Eating one piece of citrus fruit (oranges, grapefruits, tangerines) or a kiwi daily will help you meet the RDA for vitamin C

Tea

There has been some research that shows that tea may fight tooth decay. Tea contains polyphenols, which suppress the growth of bacteria in teeth. However, tea also contains fluoride so it's unclear whether the protective effect is due to the fluoride or the polyphenols, or both and whether it's the milk added to tea that adds to the protective effect.

While tea may stain teeth, studies at the University of Illinois College of Dentistry have shown that compounds in black tea can destroy or suppress the growth of cavity-causing bacteria in dental plaque, which can help prevent both cavities and gum disease.

Teeth and Water

Drinking plenty of water benefits teeth as it helps rinse away both bacteria and the remnants of food that bacteria turns into plaque. Tap water is better for teeth than bottled because it contains fluoride, which prevents tooth decay.

Fruits and vegetable

Other food choices include firm/crunchy fruits (for example, apples and pears) and vegetables. These foods have a high water content, which dilutes the effects of the sugars they contain, and stimulate the flow of saliva (which helps protect against decay by washing away food particles and buffering acid). Acidic foods, such as citrus fruits, tomatoes, and lemons, should be eaten as part of a larger meal to minimize the acid from them.

Sugar and sugar substitutes

Poor food choices include candy -- such as lollipops, hard candies, and mints - cookies, cakes, pies, breads, muffins, potato chips, pretzels, french fries, bananas, raisins, and other dried fruits. These foods contain large amounts of sugar and/or can stick to teeth, providing a fuel source for bacteria. In addition, cough drops should be used only when necessary as

they, like sugary candy, contribute to tooth decay because they continuously coat the teeth with sugar.

Foods that contain sugars of any kind can contribute to tooth decay. To control the amount of sugar you eat, read the nutrition facts and ingredient labels on foods and beverages and choose options that are lowest in sugar. Common sources of sugar in the diet include soft drinks, candy, cookies and pastries.

The modern UK diet contains a mix of sugars and other carbohydrates that can be fermented in the mouth by oral bacteria to produce acid. Research has shown that people in countries that eat more sugar have significantly higher levels of caries. Studies also show that when people ate less sugar, for example during World War II, there was also a reduction in dental caries.

Both total sugar intake and the frequency with which it's eaten are factors. Small amounts of sugar consumed frequently over a period of time will cause more damage than the same quantity consumed on a single occasion. Constant sugar nibbling encourages continuous demineralisation and the saliva doesn't have time to neutralise the acids. Sticky or chewy foods that remain in the mouth longer also cause more damage as the bacteria have more time to produce the acid.

The best beverage choices include water (especially fluoridated water), milk, and unsweetened tea. Limit your consumption of sugar-containing drinks, including soft drinks, lemonade, and coffee or tea with added sugar. Also, avoid day-long sipping of sugar-containing drinks -- day-long sipping exposes your teeth to constant sugar and, in turn, constant decay-causing acids.

Sugar substitutes are available that look and taste like sugar; however, they are not digested the same way as sugar, so they don't "feed" the bacteria in the mouth and therefore don't produce decay-causing acids. They include: erythritol, isomalt, sorbitol, and mannitol. Other sugar substitutes that are available in the U.S. include saccharin, aspartame (marketed as Equal), acesulfame potassium (marketed as Sunett), and sucralose (marketed as Splenda).

Sugarless or sugar-free food sometimes simply means that no sugar was added to the foods during processing. However, this does not mean that the foods do not contain other natural sweeteners, such as honey, molasses, evaporated cane sugar, fructose, barley malt, or rice syrup. These natural sweeteners contain the same number of calories as sugar and can be just as harmful to teeth. To determine if the sugarless or sugar-free foods you buy contain natural sweeteners, examine the ingredients label. Words that end in '-ose' (like sucrose and fructose) usually indicate the presence of a natural sweetener.

CONCLUSIONS

As correct brushing and flossing and regular dental checks, the following dietary measures can help minimise tooth decay and erosion:

- Eat sugary foods less often, particularly those of a sticky or chewable nature. Remember that dried fruits can provide sugar and a sticky surface on teeth that encourage bacterial growth and acid production
- Limit snacking of any foods, and therefore the amount of time your teeth are exposed to a bacteria-friendly environment
- Choose raw vegetables, wholemeal bread, unsweetened yoghurt or cheese as snacks
- Avoid sugary or acidic drinks between meals. Water or milk are the best option
- Chew sugar-free gum after a meal to help produce more saliva to neutralise the acid

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