

Sugar, food and dental health



Tooth decay and other oral conditions are a major cost in the community and are seen to disproportionately affect the most vulnerable. Tooth decay has many causes. Diet, including sugar and starch intake, is one aspect. How often you eat food and drinks, and how vigilant and proactive you are about looking after your teeth also play a role.

DID YOU KNOW?

The longer a food stays in your mouth or sticks to your teeth the higher the chance it can cause tooth decay.

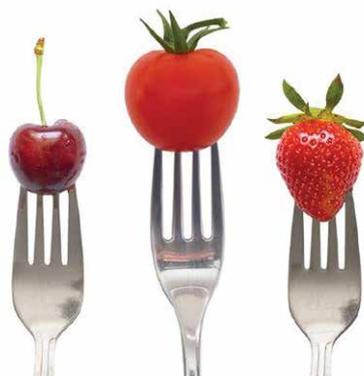
It is not just obvious sugary foods like confectionary that can cause tooth decay. For example, dried fruits and muesli bars are concentrated sources of sugar and starch and can stick to your teeth for a long time, meaning the risk of tooth decay is higher the more often these foods are eaten.



How tooth decay happens

Tooth decay occurs when the hard outer enamel layer of the tooth is damaged. Most damage to tooth enamel is caused by a build-up of a sticky film on the teeth called plaque. Bacteria found in plaque break-down sugary and starchy foods stuck on or between teeth into acids. (Starch is found in carbohydrate foods like bread, rice and pasta.) These acids can attack teeth, sapping important substances like calcium, phosphate and fluoride out of the tooth's protective coating – the enamel. Over time, this causes holes to form in the teeth.

It is not just sugars and starch that can weaken the tooth enamel and cause tooth decay – acidic foods can too. These include foods such as wine, fruit juice, pickled foods and soft drinks.



Causes of tooth decay

The **type** of food consumed (including the form, acidity and nutrient composition) and how **frequently** acidic, starchy and sugary food and drink are consumed are two key indicators of how likely tooth decay is to happen.

How well saliva works, oral hygiene practices, fluoride use and the healthiness of the overall diet play a role in the development of tooth decay.

Saliva is an important weapon against plaque

Saliva washes food away, reduces the amount of decay-causing bacteria, and cancels out the damaging acids these bacteria produce. It also helps rebuild enamel.

If you don't produce enough saliva, which can occur with some illnesses, old age, or due to certain medications, this can contribute to tooth decay.

DID YOU KNOW?

Data suggests, on average only half of all adults brush their teeth twice a day.

Brushing teeth twice a day with a fluoride-containing toothpaste can reduce tooth decay.

How frequently you eat foods that damage your teeth is important

Saliva needs at least 2 hours to be effective in protecting teeth.

Dental experts agree that the frequent consumption of foods and drinks that are damaging to teeth has more impact on dental health than the amount consumed.

When eating these foods, it is important that you allow sufficient time between snacks and meals for your saliva to work its magic. The key is to 'give teeth a rest'.

Daily habits to protect your teeth

What preventative measures you take to protect your teeth also impacts on your dental health. Unfortunately, many people have become complacent, skimping on these simple but effective solutions recommended by the Dental Associations.

- **Brush your teeth** twice a day, floss once a day and visit your dentist regularly.
- Use **fluoridated toothpaste** and drink tap water (if it is fluoridated) rather than bottled water. Fluoride helps protect teeth by slowing down the enamel break-down caused by the acids as well as helping saliva rebuild the enamel.
- Eat a balanced and **healthy diet** to keep your teeth strong.

Nutrition advice for dental health

Dental Associations also recommend the following simple eating strategies that you can adopt to help keep your teeth healthy.

- Be careful how often you eat and drink sugary foods and drinks throughout the day.
- If you do want to drink a sugary or acidic beverage, drink it quickly rather than sipping it slowly over time. Sipping it slowly increases the exposure time of the drink on your teeth and interrupts the action of saliva.
- Try not to snack between meals on sugary, starchy or acidic foods and drink. Instead snack on food and drinks that are kinder to your teeth like dairy products.
- Chew on sugar-free gum after a meal to promote saliva production.



SOME FOODS AND NUTRIENTS CAN BE PROTECTIVE FOR DENTAL HEALTH

1. Fluoride - Drinking tap water, or topical fluoride application, helps remineralise and strengthen teeth
2. Dairy foods - eating cheese after a sweet food produces saliva and balances the pH in the mouth, which reduces harmful acid. Dairy foods also provide calcium and phosphate to strengthen teeth
3. Xylitol - chewing sugar free gum helps remove food from teeth and increases saliva production
4. Fresh fruits and vegetables - Vitamin C and fibre help keep gums healthy. Fibrous fruit and vegetables also clean teeth by scrubbing away plaque as you eat them
5. Artificial sweeteners - replacing sugar with artificial sweeteners reduces the cariogenic potential of foods, however some foods (e.g. diet soft drinks) might remain very acidic and can still damage teeth

For individual health advice see a qualified health professional.

Further Reading

1. ADA. Diet and Nutrition. <https://www.ada.org.au/Dental-Health-Week/Oral-Health-for-Busy-Lives/Diet-and-Nutrition>
2. Ministry of Health. Food and Drinks for Healthy Teeth <https://www.health.govt.nz/your-health/healthy-living/teeth-and-gums/keep-your-smile-looking-good/easy-food-and-drinks-healthy-teeth>
3. Australian Dental Association 2020. Australia's Adult Oral Health Tracker 2020, Mitchell Institute, Victoria University, Melbourne. ada.org.au/oralhealthtracker



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