

Tooth Decay (Dental Caries)

Tooth Decay (Dental Caries) is a common problem that occurs when acids in your mouth dissolve the outer layers of your teeth eventually causing cavities. Tooth decay remains the most prevalent chronic disease in both children and adults, even though it is largely preventable.

What causes tooth decay?

Cavities are caused by bacteria. When the bacteria in tooth plaque (sticky film) mix with certain types of sugars and carbohydrate, this creates acid. The acid breaks down areas of enamel, which covers the outside of a tooth. With time, this creates a small hole in the tooth called a cavity.

Signs and symptoms

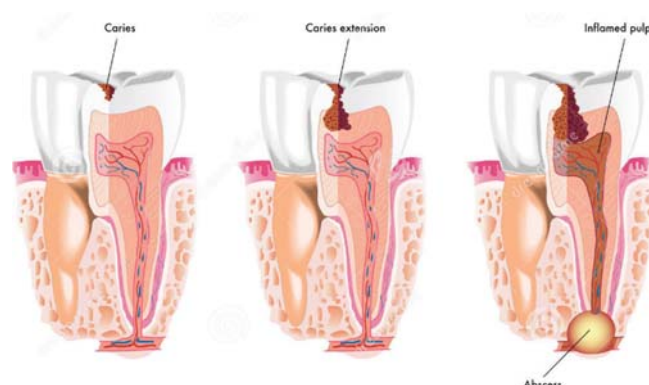
Tooth decay typically does not cause pain until it has reached an advance stage. Many patients are not aware that they have cavities until the decay reaches the nerve (pulp), generally necessitating root canal treatment (removal of the nerve) or irreversible tooth loss.

As the problem develops, symptoms of tooth decay can include:

- tooth sensitivity – short sharp pain when eating or drinking something hot, cold or sweet
- grey, brown or black spots appearing on your teeth
- bad breath
- an unpleasant taste in your mouth
- leaking fillings which eventually fall out
- food packing

Without treatment, plaque and bacteria will enter the pulp (the soft centre of the tooth that contains nerves and blood vessels). At this stage, your nerves will be exposed to bacteria resulting in dental pain or toothache. The bacteria can also infect tissue within the pulp, causing a dental abscess (collections of pus at the end of the teeth or in the gums).

Tooth decay typically occurs in teeth at the back of your mouth, known as molars and premolars. These are large flat teeth used to chew food. Due to their size and shape, it is easy for particles of food to get stuck on and in between these teeth. They are also harder to clean properly.



Stages of tooth decay followed by infection of the nerve and abscess formation

What causes tooth decay?

Your mouth is full of bacteria that combine with small food particles and saliva to form a sticky film known as plaque. When you consume food and drink high in carbohydrates – particularly sugary foods and drinks – the bacteria in plaque turn the carbohydrates into energy they need, producing acid at the same time.

If the plaque is allowed to build up, the acid can begin to break down the outer surface of your tooth and can eventually enter and damage the soft part at the centre of the tooth.

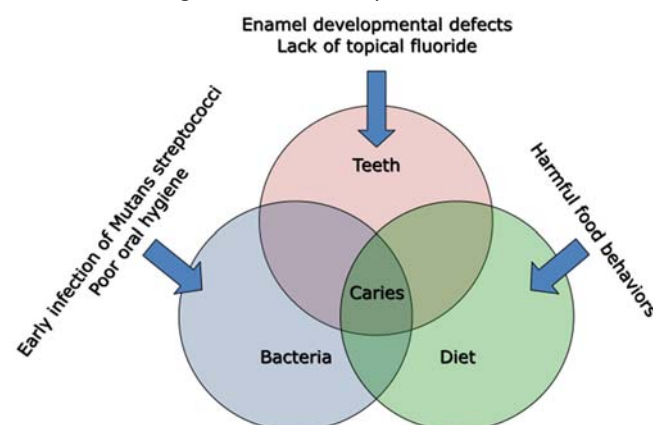
Increased risk

There are a number of factors that can increase your risk of tooth decay. These include:

Diet

Even with good brushing and flossing, eating food and drink high in carbohydrates, particularly snacking regularly between meals, will increase your risk of tooth decay.

Tooth decay is often associated with sweet and sticky food and drink – such as chocolate, sweets, sugar and fizzy drinks – but starchy foods – such as crisps, white bread, pretzels and biscuits – also contain high levels of carbohydrates.



Poor oral hygiene

If you do not regularly brush your teeth and clean between them with floss or an interdental brush, you are at a higher risk of tooth decay. You should brush your teeth at least twice a day using fluoride toothpaste and especially at night. From our experience, we find that patients who only brush once a day are unable to adequately keep the bacteria and plaque off their teeth.

Smoking and alcohol

People who smoke and drink alcohol regularly are at an increased risk of tooth decay.

This is because tobacco can interfere with production of saliva, which helps keep the surface of your teeth clean, and alcohol can contribute to the erosion of tooth enamel.

Smoking in particular dries out the mouth, promotes bacterial growth in the mouth and can cause other oral problems including gum disease and oral cancers.

Dry mouth / too little saliva in your mouth

People who have lower levels of saliva in their mouth are at higher risk of developing tooth decay, because saliva helps to keep the surface of your teeth clean and can neutralise acids in your mouth.

A number of medicines, medical treatments and health conditions can lower the amount of saliva in your mouth, including:

- High blood pressure medication
- Antidepressants
- Antihistamines
- Strong pain medications such as Oxycodone /Endone

If you are taking a medicine, receiving treatment, or have a medical condition known to cause dry mouth, it's particularly important to maintain good oral hygiene and ensure you stay well hydrated.

Gastric reflux

This is a condition in which stomach acid and food in the stomach back up into the esophagus. This causes stomach acid to come in contact with teeth, which may cause dental caries.

How do we prevent and treat dental decay?

Prevention is always better than cure and prevention is essential to ensuring any dental treatment completed lasts as long as it can. Dental work, including fillings, root-canals, crowns and bridges do not last forever and their lifespan is dependent on prevention and how well they are looked after.

During the early stages of tooth decay, before a cavity is formed, tooth decay can be halted or reversed with good preventative measures.



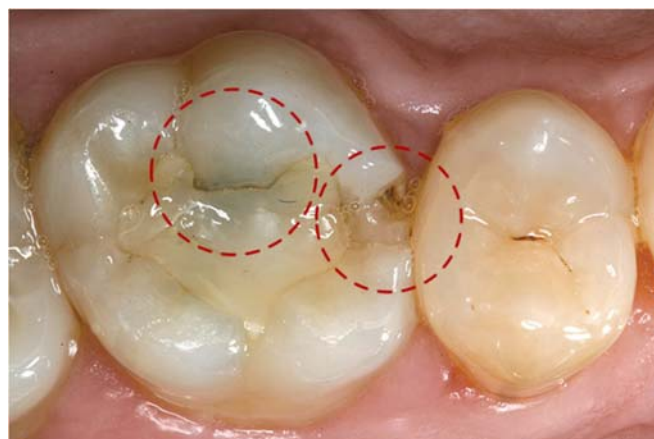
Early tooth decay (white spot lesions) which are reversible



Cavities which are not reversible and require restoration

Unfortunately once a cavity forms (a hole develops) in your tooth/teeth, the damage is not reversible and the cavity requires restoring either with a filling, onlay, inlay or crown depending on the extent of damage and amount of remaining tooth structure.

Decay can occur around existing fillings if they are not maintained or neglected and these may require replacement if they are leaking, broken or chipped along the edges where they seal the tooth.



Existing filling with leaking margins and cavitation in between 2 adjacent teeth. A larger filling is required to repair this tooth.

How can I prevent tooth decay?



Change your diet by reducing sugary and high carbohydrate foods which feed the bacteria in your mouth. This can be achieved by:

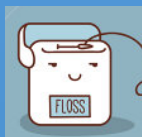
- Eating healthy and avoiding processed foods high in carbohydrates, soft drinks, sports drinks, sweets and chocolates. Avoid sugar-free fizzy drinks, including soda water or sugar-free soft drinks as these drinks are still acidic and can still promote tooth decay and tooth erosion.
- Minimising snacking in between meals or a grazing pattern of eating.
- Move sweet foods to straight after your main meals of breakfast, lunch and dinner
- Rinse your mouth with water or mouthwash straight after meals and snacks. Acids can be produced within 10mins after eating.
- Avoid sipping sweet drinks for extended periods of time. This includes sugar in tea or coffee. Consider no sugar or artificial sweeteners as an alternative. If you must have sugar in your tea or coffee, drink it quickly and rinse with water afterwards.



Drink lots of water and stay hydrated. Nothing beats plain water for your teeth and general health.

Thoroughly brush your teeth at least 2 times a day with fluoride toothpaste and a soft brush for at least 2 minutes. Focus more on your back teeth and along the gumline as these areas are easily missed.

In our experience, once a day is simply not enough to keep plaque and bacteria levels low. After brushing, spit out the tooth paste and avoid rinsing for additional protection of your teeth. Your dentist may prescribe you a high fluoride toothpaste if your regular toothpaste is not effective enough or if you are at high risk of dental decay.



Use dental floss/flossers to clean between your teeth at least once a day.



Quitting smoking if you are a smoker. We understand quitting smoking is not an easy task, so if needed, we are able to provide you with resources to help in the process. Have a talk to your GP about Champex or patches which can reduce cravings and improve the success of quitting.



See your dentist every 6-12 months for dental cleanings and oral exams. Check-ups, cleans and routine x-rays are much cheaper than fillings, root canals, dentures or crowns. Tooth decay goes unnoticed by many patients as it does not cause much pain until it is too late.

GOOD FOOD

VS.

BAD FOOD

FOR YOUR TEETH

YEAH YEAH YEAH, DON'T EAT SUGAR, BLAH BLAH BLAH

Wait a second, there's more to it than just sugar. Plaque is a thin, invisible film of sticky bacteria and other materials that covers all the surfaces of all your teeth. When sugars or starches in your mouth come in contact with plaque, the acids that result can attack teeth for 20 minutes or more after you finish eating. Repeated attacks can break down the hard enamel on the surface of teeth, leading to tooth decay. Plaque also produces toxins that attack the gums and bone supporting the teeth. Learn the difference between different foods and help protect your entire mouth from the bad stuff!

THE GOOD GUYS



FIBRE-RICH FRUITS AND VEGETABLES.

Foods with fibre stimulate saliva flow, which, next to good home dental care, is your best natural defense against cavities and gum disease. About 20 minutes after you eat something containing sugars or starches, your saliva begins to neutralize the acids and enzymes attacking your teeth. Because saliva contains traces of calcium and phosphate, it also restores minerals to teeth.



MILK, YOGURT, AND DAIRY PRODUCTS.

Cheese is another saliva generator. The calcium in cheese, and the calcium and phosphates in milk and other dairy products, help put back minerals your teeth might have lost due to other foods.



GREEN AND BLACK TEAS.

Black and green tea contain polyphenols that interact with plaque bacteria. These substances either kill or suppress bacteria, preventing them from growing or producing tooth-attacking acid.



FOODS WITH FLUORIDE.

Fluoridated drinking water, or any product you make with fluoridated water, helps your teeth. This includes powdered juices (as long as they don't contain a lot of sugar) and dehydrated soups. Commercially prepared foods, such as poultry products, seafood, and powdered cereals, also can provide fluoride.

THE BAD GUYS



STICKY CANDIES AND SWEETS.

If you eat sweets, go for those that clear out of your mouth quickly. So thumbs down for lollipops, caramels and cough drops that contain refined sugar. Surprisingly, thumbs up for chocolate, which, because its sugars are coated in fat, slips easily out of your mouth.



STARCHY FOODS.

Avoid anything that can get stuck in your teeth. They can be missed by brushing and flossing and well. Soft breads, potato chips and popcorn should be avoided when possible.



CARBONATED SOFT DRINKS.

While we're at it, be sure to add sports drinks to this list. Besides being laden with sugar, most soft drinks contain phosphoric and citric acids that erode tooth enamel.



ANYTHING THAT DRIES OUT YOUR MOUTH.

Alcohol and many medicines can remove the saliva that helps clean and protect your teeth. If medications are causing dryness, consider talking to your doctor about getting a fluoride rinse, or a fluoride gel with which to brush your teeth.