Dental decay

What is it? (signs)

Dental decay is the result of destruction caused by bacteria within our mouths that have fed on sugars from the food and drink we have eaten or drunk. We are taught from a young age to brush our teeth twice a day and that too many sweets will rot our teeth. The less you brush the more bacteria there are to eat the available sugars in your mouth. The more sugar you eat, the more there is available for the bacteria to metabolise creating the harmful acid. Over time the acid created by the bacteria will start to dissolve the outer layer on the tooth, the enamel. It burns a small hole in any available tooth surface creating a cavity in the enamel. This then progresses rapidly into the second layer of the tooth, the dentine. Unfortunately, at this stage it now requires dental intervention to be fixed to stop further progression. If the cavity is left untreated, the bacteria will continue to destroy tooth tissue, progressing further into the tooth until it reaches the nerve or pulp (the part of the tooth that's alive) resulting in the need for extraction. Dental decay is often referred to as dental caries.
Where does bacteria in my mouth come from? We all have bacteria in our mouths with the potential to cause disease. The film of bacteria is known as plaque. Plaque is a thin, sticky film that keeps forming on your teeth. It's made up mostly from bacteria. This is why it is important to brush twice daily to remove it effectively before it has chance to cause any lasting damage to the teeth and gums. It begins to form from the moment we have just brushed our teeth starting from the gumline. It contains many types of bacteria and these become more toxic and will cause more damage the longer the plaque is left on the teeth to mature.

Why does tooth decay happen?

Decay happens when sugars in food and drinks react with the bacteria in plaque, forming acids. Every time you eat or drink anything containing sugars, these acids attack the teeth and start to soften and dissolve the enamel. The attacks can last for an hour after eating or drinking, before your saliva (containing salts and minerals) can start to remineralise the enamel (the hard outer layer of the tooth's surface) and keep it strong. It's not just sugars that are harmful. Other types of carbohydrate foods and drinks react with plaque and form acids. (These are the 'fermentable' carbohydrates: for example 'hidden sugars' in processed food, natural sugars like those in fruit and cooked starches). Get into the habit of checking food labels and pay attention to the traffic light system.

Having a frequent intake of sugary or acidic snacks and drinks between meals can increase the risk of decay, because your teeth come under constant attack and do not have time to recover. It is therefore important not to keep having sugary snacks or sipping sugary drinks throughout the day. If you do want something sweet then it is best to have straight after a meal like a pudding/dessert.

What does it look like/what I might feel? (symptoms)

In the early stages of dental decay there are no symptoms. A dental professional may be able to detect a cavity in its early stages when they examine your teeth or this may need to be confirmed or detected with an x-ray. This is why you should visit your dental team regularly, as small cavities are much easier to treat than advanced decay.

When a cavity or decay progresses further into your tooth (the dentine) you may start to experience some symptoms such as sensitivity to cold food and drinks, sweet and acidic food and drinks. Sometimes hot food and drinks can also cause sensitivity.

As the decay progresses through the dentine it gets near the pulp. The pulp is the nerve chamber within your tooth. This might mean you may suffer from toothache. As the decay gets closer to the pulp, the pain may last longer and you may need to take painkillers - paracetamol or ibuprofen - to control the pain. You should visit your dental team straight away as the tooth is dying, and you may develop a dental abscess if it is not treated. This will be really painful and you may develop a swelling.

Toothache is a sign that you should visit your dental team straight away, as it is a warning that something is wrong. If you don't do anything, this will usually make matters worse and you may lose a tooth that could otherwise have been saved.

Possible treatment

Usually most cavities can be fixed with a filling. Either a dentist or a dental therapist will remove the decay and repair the tooth using a filling material that is most suitable to the cavity. If you have had pain, swelling, the tooth has been tender to bite on or the decay in the tooth is very deep, this would indicate that the nerve in the middle of the tooth could be damaged. If this is the case, the dentist will need to carry out root canal treatment by removing the nerve and then repairing the tooth with a filling and eventually a crown. If the tooth is so badly decayed that it cannot be repaired, the tooth will need to be extracted.

What can I do myself to help?

As each of the adult molars (back teeth) erupts into the mouth (usually the first molar erupts when a child is six) the tooth can be sealed with a plastic coating known as a ‘fissure sealant’. The sealant can protect the tooth as it fills all the little crevices on the tooth’s surface, creating a flatter surface that is easier to clean. Adults can also have this treatment if the teeth are free from decay. Your dental team will discuss whether this is right for you.

What can I do to prevent decay?

Prevention is key! The best way to prevent dental decay is by having really good oral hygiene and minimising the frequency of sugary drinks and snacks in your diet.

You should brush your teeth thoroughly last thing at night and at least one other time during the day, with a fluoride toothpaste. After you have brushed at night, you should not have anything to eat or drink except for water. Make sure that you brush all surfaces of your teeth - the inner, outer and biting surfaces of your teeth. It should take you about 2 minutes. You should also use interdental' brushes or dental floss/tape, to remove the plaque and food debris effectively as no manual or electric tooth brush reaches these areas.

Diet is also key to preventing decay. Every time we eat something our mouth becomes an acidic environment. If it is something sugary be it food or drink, the bacteria in our mouth feed off these sugars too and create an acid, burning a hole in our tooth's surface. The more sugary drinks or snacks we have throughout the day, the higher the potential risk of developing tooth decay. So keep sugars to mealtimes – including sugary drinks. If you have sugar in tea or coffee swap for a sweetener otherwise plain water or milk is a safe choice and choose tooth friendly snacks such as fresh fruit or vegetables, breadsticks and cheese, nuts or toast with butter.

Is there anything else I can do?

Visit your dental team regularly, as often as they recommend. Have sugary and acidic food and drinks less often. Avoid having snacks between meals, to limit the number of times your teeth are under attack from acids.

Chewing sugar-free gum for up to twenty minutes after a meal can help your mouth produce more saliva, which helps to cancel out any acids that have formed. One that contains an ingredient called xylitol is best.

Can fillings be prevented?

Yes in some circumstances. In the very early stages of decay, your dental team may apply a fluoride varnish onto the area. This can help stop more decay and help 'remineralise' the tooth. However, it is important to follow the diet and oral hygiene advice that your dental team have given you. There is strong evidence that using a fluoride toothpaste containing 1350-1500ppm (ppm means parts per million) twice a day will prevent decay from developing further and new areas of decay forming. You can also have a concentrated dose of fluoride painted on your tooth's' enamel by a dental professional every three months. This will provide extra protection against tooth decay. The regular application of fluoride varnish has been shown to help prevent dental decay in both baby and adult teeth. The fluoride varnish sets quickly when it is applied to your teeth and wears off after a few hours. The application process is quick and simple, and does not hurt. Ask your dental professional if fluoride varnish is suitable for you or your child to have applied to your teeth at routine check-up appointments.

http://www.dentalhealth.org
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