

a composite resin, which is tooth-coloured for a better appearance. Amalgams are used primarily in molars and premolars. Resins are used in all teeth. Gold or ceramics may be used if greater strength is needed, but this is more expensive.

If a cavity is large with extensive breakdown, the remaining tooth may not be able to support the amount of filling material that would be needed to repair it. In this case, the dentist will remove the decay, fill the cavity, and cover the tooth with an artificial crown.

Sometimes the crown of the tooth may be able to be restored but there is more damage to the pulp of the tooth. In these cases, the dentist may refer you to a dental specialist called an endodontist for root canal treatment. In this procedure, the endodontist removes the tooth's pulp and replaces it with an inert material. In most cases, the tooth's natural crown will need to be replaced with an artificial crown.

## Prognosis

If a cavity goes undiagnosed, it likely will cause the tooth to decay significantly. Eventually, the tooth may be destroyed by uncontrolled decay. Having caries increases your risk of more caries for several reasons:

- The same oral care and dietary habits that contributed to the plaque and acids that caused the initial cavity may cause more decay
- Bacteria tend to adhere to fillings and other restorations more than to smooth teeth, so those areas will be more susceptible to new caries.
- Cracks or gaps in the fillings may allow bacteria and food to enter the tooth, leading to decay from beneath the filling.

## When to visit a SADA Dentist

The early stages of decay are usually painless. Only regular professional examinations and X-rays can detect early trouble. If you develop sensitivity to chewing or too hot, cold or sweet foods or beverages, contact your dental professional.

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**Dental Caries  
(Tooth Decay)**

## What is Dental Caries (Tooth Decay)?

Dental caries is the medical term for tooth decay or cavities (holes). Many different types of bacteria normally live in the human mouth. Dental caries, otherwise known as tooth decay, occur when germs (bacteria) build up in your mouth and lead to the production of plaque.

It is caused by dissolution of tooth minerals by bacterial acids. They accumulate (along with saliva, food particles and other natural substances) on the surface of the teeth in a sticky film called plaque. Plaque forms especially easily in cracks, pits or fissures (grooves) in the back teeth; between teeth; around dental fillings or bridgework; and near the gum line. Some of the plaque bacteria convert sugar and carbohydrates (starches) in the foods we eat into acids. These acids dissolve minerals in the surface of the tooth, forming microscopic channels that get larger over time.

The damage can occur anywhere the tooth is exposed to plaque and acid, including the hard outer enamel on the tooth crown or the unprotected root of the tooth that has been exposed by gum recession.

Caries can penetrate the protective enamel down to the softer, more vulnerable dentine (main body of the tooth) and continue through to the soft tooth pulp and the sensitive nerve fibres within it. The pain associated with cavities may be caused by inflammation initiated by bacteria and an imbalance of fluid levels in the tubules inside the dentine.

### Signs of dental caries

Early caries may not have any symptoms. Later, when the decay has eaten through the enamel, you may experience:

- food trapped frequently between your teeth;
- discomfort or pain in or around your mouth;
- difficulty in biting down on certain foods;
- sensitivity to hot, cold or even sweet foods;
- bad breath;
- white, then dark, spots on your teeth

### What can you do?

Cavities can be prevented by reducing the amount of plaque and bacteria in the mouth and with careful attention to diet.

- Visit the dentist regularly: one of the best ways to protect your mouth is by visiting the dentist regularly. Most oral health conditions are largely preventable and can be treated in their early stages. The best way to do this is by daily brushing and flossing and professional dental cleanings twice a year. A regular check-up allows the dentist to discover any dental problem and remove any built up plaque, which if left untreated can lead to tooth decay or gum disease.
- Teeth can be strengthened by fluoride. A dental professional can evaluate your risk of caries and then suggest appropriate fluoride treatments. In children, new molars can be protected by having the dental professional apply a sealant as soon as the teeth come fully into the mouth.
- Avoid diets high in sugar: eat a well-balanced, low-sugar diet. Sugar is the number one cause of dental caries, which is the most common health condition globally. Brush your teeth for two minutes, twice a day with a fluoride toothpaste: toothbrushing helps remove food and plaque.

### What is the impact of dental caries?

- Untreated dental caries is the most common health condition worldwide, affecting approximately 2.3 billion people worldwide.
- More than 530 million children suffer from

- tooth decay of primary teeth (milk teeth).
- Dental caries affects people of all ages throughout their lifetime.

### Diagnosis

A SADA dentist will look for caries at each visit, regardless of whether it is a routine visit or an appointment made by the patient because of pain.

The SADA dentist will examine the teeth visually and will gently probe the teeth with an instrument called an explorer to determine if there are pits or areas of damage. Periodically, or if the dental professional suspects hidden caries, X-rays will be taken.

### Expected Duration

White spots, indicating early caries that has not yet caused cavitation, may be reversed if acid damage is stopped and the tooth is given a chance to repair the damage naturally. Caries that has destroyed enamel cannot be reversed. Most caries will continue to worsen and deepen and with time, the tooth may decay down to the root. The amount of time the breakdown takes will vary from person to person. Caries can progress to a painful level within months or it can take years to reach that stage.

### Treatment

The standard treatment for caries that has progressed to enamel cavitation is to fill the tooth. After the dental professional removes the decayed material in the cavity (usually following the use of anaesthesia to block the pain), the cavity is filled. Fillings usually are made of a dental amalgam, which is a silver-grey material made from silver alloyed with copper or other metals in order to improve durability, or of