

# Tooth Decay (Caries)

Dental caries, also known as a cavity or tooth decay, is a common disease of children as well as adults. Although there have been notable declines in tooth decay over the past three decades, it remains the most common chronic childhood disease, more widespread than asthma by at least five times. For adults, nine out of 10 over the age of 20 have some degree of tooth decay. Proper oral hygiene and nutrition are necessary to prevent cavities.

## ABOUT DENTAL CARIES

Dental caries is a chronic, infectious disease caused by acid-forming bacteria that dissolve the surfaces of the teeth, creating holes. Three factors allow this to happen:

- A susceptible tooth surface
- Groups of bacteria found in dental plaque, the white, sticky substance that accumulates on teeth, especially around the gum line
- A diet high in sugar

### **Early childhood caries**

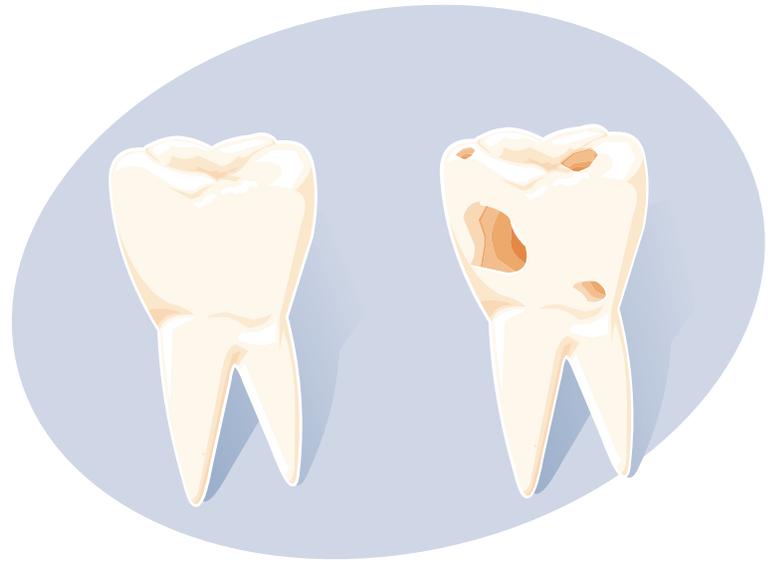
Early childhood caries (ECC) is a severe form of tooth decay in the baby (primary) teeth of infants and toddlers. (See "Tips for Parents" on reverse side.) Baby teeth have thinner enamel (outer tooth surface) than permanent teeth, making them very susceptible to decay. Government programs are available to assist economically disadvantaged children, who are the most vulnerable to ECC.

### **Root caries**

With proper oral hygiene, many seniors are keeping their natural teeth longer. For these clients, the prevention and treatment of root caries (decay at the gum line) will become an ever-increasing part of their changing oral health needs. Seniors who have never had problems with their oral health may suddenly face xerostomia (dry mouth) from multiple medications and exposed, unprotected roots due to gingival (gum) recession.

## SIGNS AND SYMPTOMS

A person experiencing caries may not be aware of the disease. There are many early signs of decay including chalky white spots or signs and symptoms that are not



apparent. As the condition progresses, the affected area may change to brown or black and will eventually turn into a cavity or hole in the tooth. Before the cavity forms, the process is reversible, but once a cavity forms, the tooth damage is permanent.

As the decay progresses further into the tooth, it can cause pain and the tooth could die. The pain may worsen with exposure to heat, cold, sweet or sour food and drink. Left untreated, this can lead to:

- Infection or swelling
- Halitosis (bad breath)
- Inability to bite down on the tooth
- Fractured teeth
- Loss of teeth
- Difficulty with speech and loss of sleep due to pain
- Unsightly appearance
- Expensive treatment, e.g., root canal
- Time away from work or school for pain and/or treatment

## CAUSES AND RISK FACTORS

The mouth contains bacteria, making everyone susceptible to tooth decay. Risk factors for increasing the chances of getting the disease include:

- Poor oral hygiene
- High amounts of harmful bacteria

- A diet high in sugar
- Insufficient fluoride
- Medications that contain sugar or cause dry mouth
- Malnutrition, including vitamin and mineral deficiencies
- Medical conditions that decrease the flow of saliva, which is needed to help rinse away food and neutralize acids
- Chemo/radiation therapy
- Eating disorders
- Drug/alcohol abuse
- Irregular dental care
- Gum disease and recession resulting in exposure to root surfaces

## TREATMENT

In some cases caries may be visible, however, other methods of detection such as radiographs are used for less visible areas of teeth and to determine the extent of destruction. Sometimes tooth decay is reversible in the early stages. Dental hygienists have an important role in preventing decay.

Depending on the degree of decay, treatment options may include:

- Fillings\*
- Root canal
- Crown
- Extraction

\* While a dentist removes the decay, a dental hygienist trained in restorative procedures may fill the hole with the appropriate material.



## PREVENTION AND HOME CARE

- Maintain proper oral hygiene. To remove plaque and food debris, brush twice a day for two minutes with fluoridated toothpaste and a soft toothbrush; clean or floss between teeth and gums once a day; clean or scrape the tongue daily.
- Replace toothbrush every two to three months, or when bristles start to bend, and after a cold or flu.
- Visit a dental hygienist for:
  - regular professional cleanings, oral assessment, customized home-care program and dietary counselling

- fluoride applications for children and some adults, depending on susceptibility (See Fact Sheet on “Fluoride”)
- sealant applications, a protective, plastic coating applied to the chewing surfaces of the back teeth, in cavity-prone areas where pit and fissures form (See Fact Sheet on “Pit and Fissure Sealants”)
- Maintain a well-balanced diet by following Canada’s Food Guide.
- Limit the amount of sugar and carbohydrates in food and beverages (sipping a sugary drink throughout the day is more damaging to the teeth than drinking it all at once).
- Avoid sticky and or sweet snacks, e.g., raisins, dried fruit.
- After eating, rinse thoroughly with water or chew sugarless gum.

## Tips for parents

*Infants and toddlers (newborn to three years)*

Parents play an important role in caring for their children’s mouths and helping them develop good oral cleaning habits.

- Avoid giving children milk or juice in their bottle at naptime or bedtime. This can lead to decay, especially in the front teeth. Instead, try a bottle of water or no bottle at all.
- Gently clean gums and newly erupted teeth with clean gauze or face cloth twice a day.
- Never give children sweetened pacifiers. Do not dip a soother into corn syrup, sugar, honey or sweeteners, as this will cause teeth to decay.
- A parent or caregiver should never clean a soother by putting it in their mouth. Oral bacteria, including bacteria that cause tooth decay, can be passed on to the child.
- A child should rinse or drink water after taking any medication, as it is usually sweetened for taste.
- The first visit to the dental hygienist is recommended before the child turns one, and then regular visits should be scheduled. A dental hygienist will discuss individual needs.
- Older children require assistance and supervision. (See Fact Sheet on “Oral Health for Children – A Parent’s Guide”)

*As professional health-care providers, dental hygienists are primarily concerned with promoting good oral health. Dental hygiene is among the largest of the regulated health-care professions in the province. In Ontario all dental hygienists are registered with the College of Dental Hygienists of Ontario, which regulates the profession to ensure the public receives safe and ongoing comprehensive oral care.*

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