

# Section 6

# Prevention of Dental Disease

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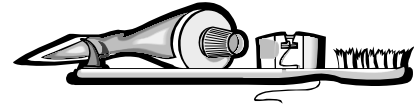
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## **Why Prevention?**

**An ounce of prevention is worth a pound of cure**, the old axiom reminds us, and certainly this is true in the case of good dental care provided at an early age.

There are several reasons why dental problems exist. Lack of knowledge and practice of proper oral care techniques, misconceptions about dental visits, economic considerations, poor nutrition and poor consumer habits are contributing factors to dental disease. Dental problems do exist, but almost all can be prevented if children, parents and teachers are well informed of the causes of dental disease, practice proper methods of prevention and are aware of the need for regular dental care. Healthy teeth and gums are important and, fortunately, with all the scientific advances in the dental profession today, they are within the reach of everyone.

## **Tooth Brushing**



Brushing teeth with fluoride toothpaste is one of the most effective ways of removing decay causing plaque from the exposed surfaces of teeth. Effective brushing takes approximately two to four minutes and is recommended twice daily, once in the morning and especially before bedtime. If brushing once a day is the only time available, then bedtime brushing is the most important. If the food is left on the teeth at bedtime it can be converted to useable food for the bacteria to form acids thereby decreasing PH levels and causing decay. Also, during the night, there is a decrease of saliva and therefore less buffering of acids. Supervision and adult assisted brushing is advised for children six years of age and younger.

When brushing is not possible, alternatives such as rinsing the mouth with water, eating a piece of cheese or chewing sugar-free gum immediately after eating may be beneficial in the prevention of dental disease.

### **When choosing a toothbrush look for one that has**

- t soft bristles
- t a small head which makes it easier to reach every tooth, especially those at the very back
- t a bulky handle B easier to grasp especially for the children

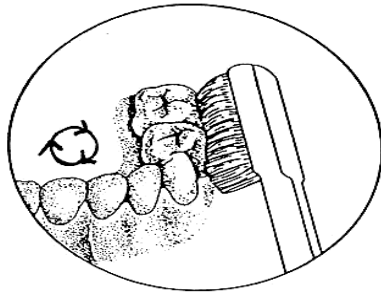
**Electric toothbrushes** are available with a variety of different features and may be recommended by dental professionals for individuals with specific needs. Rotary-type action electric toothbrushes are recommended (e.g. Braun, Oral B)

### **To care for a toothbrush**

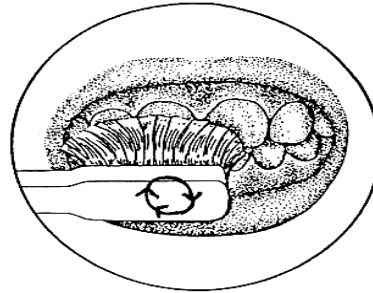
- t Rinse toothbrushes after each use and allow to air dry.
- t Replace toothbrushes when they become frayed or worn, approximately every 3 months.
- t Replace toothbrushes following an illness, cold or the flu.

**Toothbrushes should not be shared with anyone!  
Dental disease is caused by bacteria and is  
infectious!**

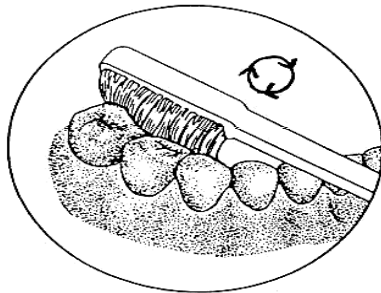
## **Toothbrushing Method**



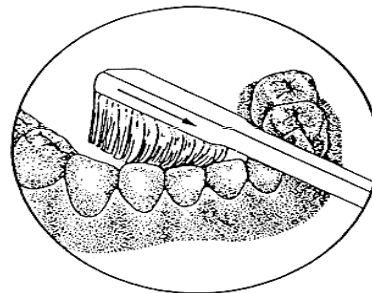
Outside



Use short, light circular strokes. If too much pressure is used, the teeth and gums may be injured.

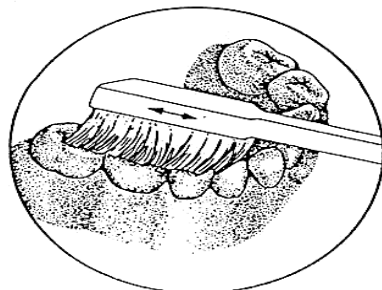


Inside back



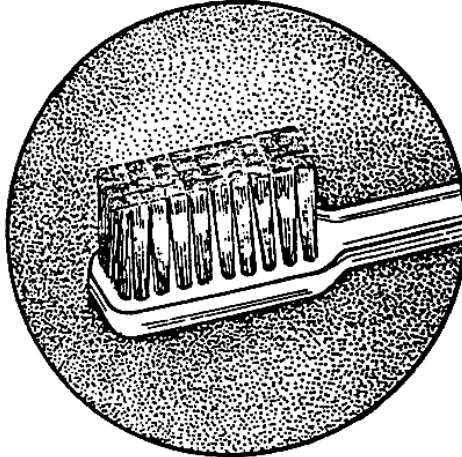
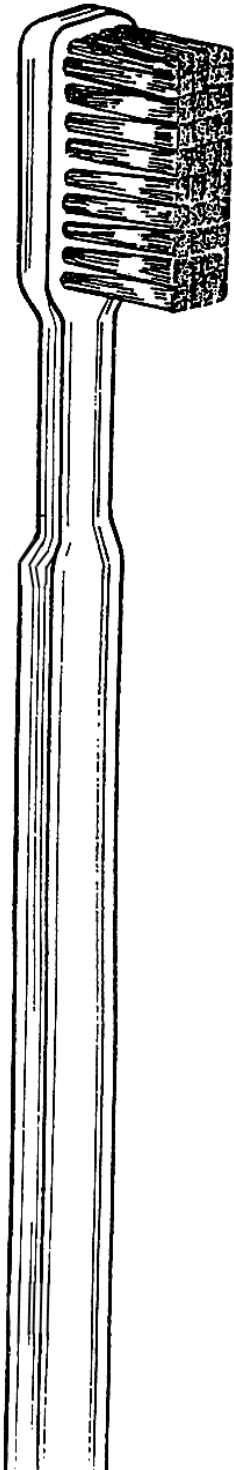
Inside front

Sweep the back of the front teeth and bottom.

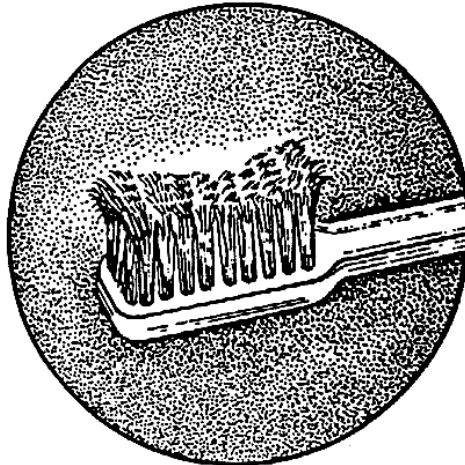


Chewing surfaces

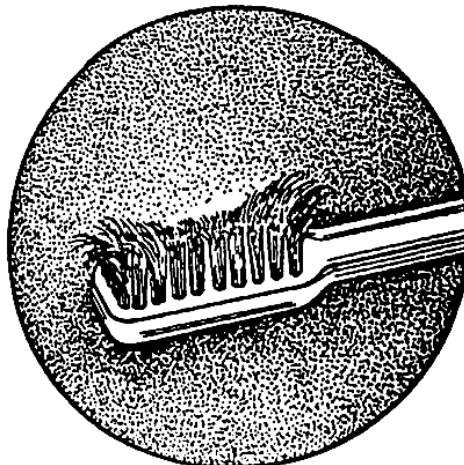
**Worn Bristles**



**New**  
– straight, even bristles  
Note: Use only toothbrushes with soft bristles.



**Old (approximately 2-3 months old)**  
– time to get a new toothbrush!



**Very old**  
– toothbrush should have been thrown out a long time ago!

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### Flossing

Flossing removes plaque and debris from areas between the teeth and gums which are inaccessible to toothbrush bristles. Flossing may precede or follow brushing in daily oral care programs. Flossing once a day is recommended for the prevention of tartar formation for children 10 years of age or older. Parents of younger children should floss their children's teeth. Younger children do not have the manual dexterity to floss.

**Dental floss** is a strong thread-like strand usually made of nylon fibres.

#### Which dental floss is best?

There are no known studies to indicate that one type of dental floss is better than another. However, conditions in an individual's mouth may respond more favourably to one particular type of floss. Seeking advice from a dental professional in determining the most appropriate floss is recommended.

#### Types of dental floss

**Waxed** dental floss has a wax-like coating and is available in various forms (i.e. lightly waxed).

**Unwaxed** dental floss does not have a wax coating. Fibres in unwaxed floss separate and flatten out as it moves over the tooth surface.

**Flavoured** dental floss is available in waxed or unwaxed form.

**Dental tape or ribbon** is a wider version of regular dental floss and is flat while dental floss is round.

**Fluoridated floss** has fluoride incorporated in its fibres.

**Super floss** is approximately 12 inches long, is stiff for about 2 inches, followed by 2 to 3 inches of a wool-like material and the remainder is standard unwaxed floss. The wool-like section can be used to clean under dental bridges and in areas where teeth are missing.

**PTEE (Polytetra fluoroethylene)** dental floss slides very easily between teeth and does not fray.

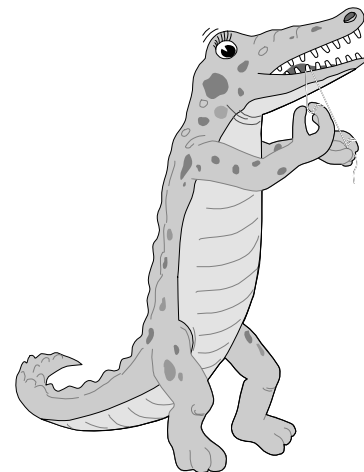
**Braided nylon** dental floss is used for dental implants.

## **The Ahow to≅ of flossing**

It is important to know that improper usage of dental floss may damage tooth structure, gums and supporting tissues. Individuals may experience sore, bleeding gums after initiating flossing. If the sore, bleeding gums continue after the first week, a consultation with a dental professional is recommended. Flossing can be a challenging skill to acquire; persistence and continuous practice is necessary. First-time flossers may find the use of a mirror helpful.

Children with orthodontic appliances may require professional assistance to learn how to effectively floss using a flossing aid.

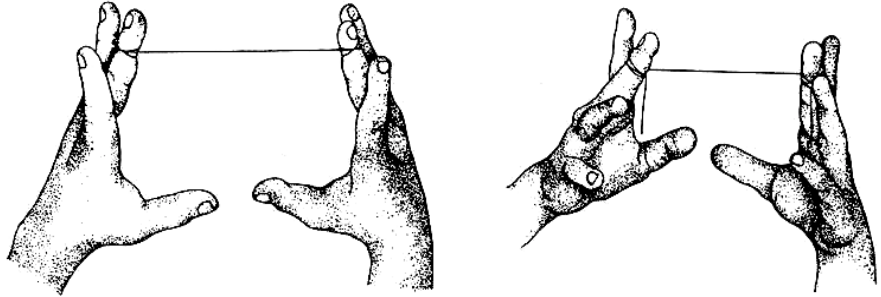
**Floss holders** are designed to hold dental floss therefore eliminating the need to place fingers in the mouth. There are several designs available. However, the Awish-bone≅ style is the most popular. The handle of the floss holder is held and the floss is guided between the contact points in the mouth. Floss holders may be effective for individuals who have reduced dexterity, have physical limitations, have very large hands, or for those with a strong gag reflex.



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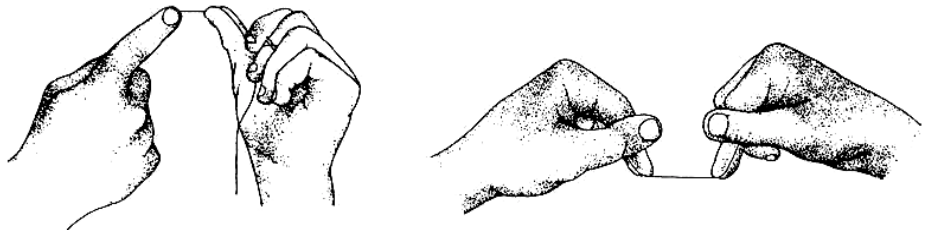
## Flossing Method

Wrap the floss around the middle fingers. The floss should be approximately an arm's length or 1 m long.

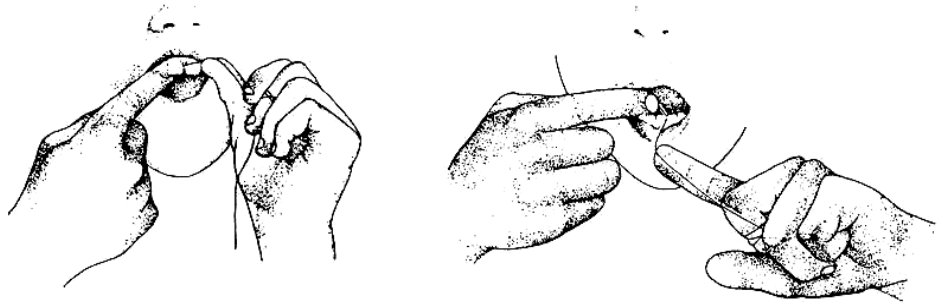


For the upper teeth use the index finger and the thumb to guide the floss. The thumb should be on the outside.

Use the two index fingers for flossing the lower teeth.  
Note: The fingers guiding the floss should not be more than 2.5 cm apart.



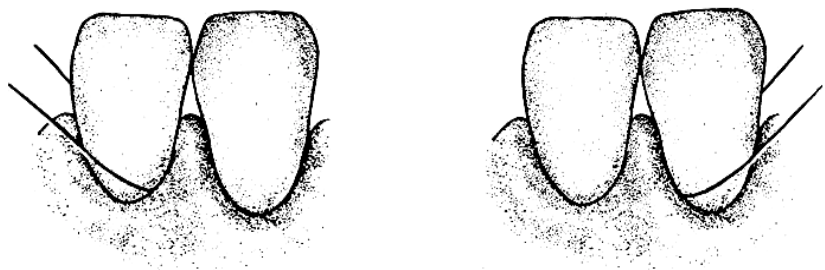
Gently insert floss between the teeth by moving back and forth in a see-saw fashion. Do not force the floss between the teeth or press down so hard as to cause bleeding.



Move the floss up and down on the side of one tooth two or three times until clean.

Move the floss to the side of the neighbouring tooth and repeat.

Note: When the floss becomes frayed or soiled, rotate the floss from one middle finger to the other, so that a new section of floss is in position.



## Fluoride

Fluoride is a naturally occurring mineral found in water, soil, rocks, air, plant and animal tissues. Exposure to appropriate amounts of fluoride significantly reduces the risk of dental decay. The Canadian Dental Association (CDA) supports the use of fluorides in the prevention of dental decay. Fluoridation of communal water supplies is recognized as one of the most successful preventive health measures in the history of health care.

### How does fluoride work?

Fluoride reduces the risk of dental decay in two ways. When ingested during the time a tooth is forming fluoride becomes incorporated into the developing dental tissue creating a more resistant form of enamel (systemic fluoride). However, the greatest benefit comes from the surface of a tooth being exposed to fluoride after it has erupted into the mouth (topical fluoride). Dental enamel and dentin are composed of mineral crystals (calcium and phosphate) held in a protein matrix. These dental minerals are readily dissolved by acid produced by bacteria during carbohydrate metabolism. Topical fluoride becomes concentrated in dental plaque inhibiting the dissolution of the minerals. Fluoride can repair the early stages of decay through remineralization by being absorbed onto the tooth surface and attracting calcium ions from the saliva. In addition, the fluoride interferes with the enzyme activity of the bacteria reducing their ability to produce acid.

### How do we get fluoride?

Fluoride comes from many sources both systemic and topical.

**Systemic fluoride** is ingested through the metabolic system and sources include;

- 1 **Food and drinks** such as vegetables, fish and beverages.
- 1 **Drinking water** from wells or communal systems may have a natural fluoride content.
- 1 **Fluoridated municipal water** offers benefits of reduced dental caries at a minimal cost. There is no difference in the dental benefits from fluoride that is naturally occurring in water to that which is added to community water.
- 1 **Fluoride supplements B tablets/drops** should only be taken at the recommendation of a dentist. They are recommended only for children at high-risk of experiencing dental decay and who live in a community with no fluoridated water. Before fluoride supplements are considered for children who consume water from natural sources (wells), testing by a qualified laboratory is recommended. These test results should be shared with the family dentist who will then be able to provide appropriate recommendations.
- 1 **Bottled water** may or may not contain fluoride. The fluoride concentration should be included on the product label.

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**Topical fluoride** is applied to the tooth surface and sources include;

- 1 **Fluoride rinses, gels and varnishes** are provided on the advice of a dental professional. The application of these fluorides may be recommended for individuals at high risk of developing dental disease and for the treatment of tooth sensitivity.
  
- 1 **Fluoride toothpaste.** This is the most common, and possibly the most important, source of fluoride. While it is meant as a topical therapy, many children age three or less swallow rather than spit out during tooth brushing. Unless a small amount of toothpaste is used, white spots (fluorosis) may form in the enamel of permanent teeth. The guidelines for the use of fluoride-containing toothpaste are as follows:

**Children under 6 years of age who use fluoridated toothpaste should:**

- 1 have toothpaste dispensed by a supervising adult,
- 1 use only a light smear of toothpaste twice a day as soon as teeth erupt, and
- 1 be encouraged not to swallow toothpaste during brushing

Fluoride has proven to be an inexpensive way of preventing tooth decay when taken in proper dosages. While the addition of fluoride to community water supplies, toothpaste, rinses and other products has contributed to a decrease in tooth decay in all age groups, there are concerns that young children may be receiving too much fluoride increasing the risk of fluorosis of the teeth. No other harmful effects from the ingestion of optimal levels of fluoride have been identified.

## **Pit and Fissure Sealants**

Dental sealants are very thin plastic protective coatings applied to the chewing surfaces of molars. Sealants prevent cavities by creating a physical barrier, filling in the pits and fissures where food debris and bacteria may get stuck, causing cavities.

- 1 Sealants are applied by qualified dental professionals
- 1 Sealants remain in place for many years but should be checked at regular dental visits

## **Dental Office Visit**

Regular visits to a dental professional are an important part of good general health and an essential part of maintaining optimal oral health.

Prepare children for the visit by discussing the dental team's role as friendly, concerned adults who help care for their teeth. Avoid giving the child the impression that the dentist may cause pain. **Children who develop positive attitudes early will be more willing to take an active part in their dental health.**

When a first visit is not an emergency, the dental team may spend time familiarizing the children with the dental office and equipment. Many books and videos are available in libraries and stores which may be useful in preparing children for their dental office experience.



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### The Dental Team

Dental visits provide an ideal opportunity for children to develop a positive attitude towards the dentist and dental auxiliaries. It also helps them develop an understanding of the role the dental team has in the prevention and treatment of dental disease.

### The Dentist

- 1 Provides examinations, advice and recommendations on oral and dental health
- 1 Provides comprehensive preventive and treatment services
- 1 Teaches people how to care for their teeth

### The Hygienist

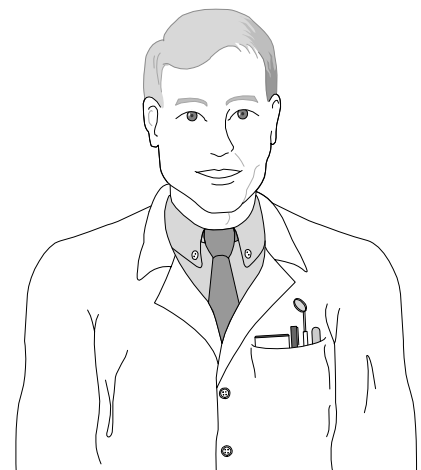
- 1 Teaches people how to care for their teeth
- 1 Provides treatment that helps prevent oral disease such as caries (cavities) and periodontal (gum) disease
- 1 May take radiographs (x-rays) of the teeth if prescribed by the dentist
- 1 Performs a variety of roles including clinical therapy such as application of pit and fissure sealants, topical fluoride and professional cleaning of teeth if needed

### The Dental Assistant

- 1 Assists the dentist and/or hygienist
- 1 Teaches people how to care for their teeth
- 1 Sterilizes instruments
- 1 Sometimes polishes the teeth and applies fluoride to reduce tooth decay (if certified to perform these procedures)
- 1 May take radiographs (x-rays) of the teeth if prescribed by the dentist

### The Receptionist

- 1 schedules appointments
- 1 Takes care of billing and payments
- 1 Orders supplies as directed



## **Dental Public Health**

The Health Protection and Promotion Act specifies that public health agencies (boards of health) are required to provide or ensure the provision of a minimum level of dental public health programs in schools as defined by the Mandatory Health Programs and Services Guidelines.

These programs include:

- 1 Annual screening in all elementary schools
- 1 Annual oral health status assessment and data collection of targeted grades
- 1 Administration of the Children In Need Of Treatment (CINOT) program including the referral and follow-up of children found to be in acute need of dental treatment
- 1 The provision of dental health education resources
- 1 The provision of teacher in-services in schools defined through the screening assessment as high-risk, and
- 1 The provision of clinical preventive services for eligible students as defined by Ministry of Health protocol

Familiar dental faces in school are the dental hygienists and dental assistants involved in the annual dental screenings, preventive clinics and the presentation of teaching resources. In addition to the programs listed above, many larger regional governments and municipalities offer comprehensive treatment programs to eligible students.

## **Over the Counter Dental Products**

### **Mouthwash**

Some mouthwashes may assist in reducing bacteria. However, they are not effective in the removal of plaque and bacteria. When bad breath is problematic, the use of mouthwash only temporarily masks the odour. Generally, mouthwash is not recommended for children or adults. They may contain alcohol.

Some mouthwashes are recognized by the Canadian Dental Association (CDA) and the label will be a reliable verification.

### **Oral irrigation devices**

Oral irrigation devices are capable of flushing away food debris but not plaque. These devices should not be regarded as a substitute for tooth brushing and flossing, but as an adjunct to tooth brushing and flossing. Dental professionals may recommend the use of oral irrigation devices for individuals with orthodontic or prosthetic appliances.

### **Tooth whiteners**

Tooth whiteners are available in liquid, gel or pastes. Tooth whiteners may lighten or bleach some stains and discolourations in teeth which have been caused by coffee, tea, cola, red wine, or smoking. The side effects could include papillae irritation, gingival irritation and pulp inflammation which could lead to root canal therapy.

**Plaque and Tartar Fighting Toothpastes** contain ingredients which may prevent the build-up of plaque and the accumulation of tartar (above the gum line). Some ingredients may also reduce gum inflammation and bleeding.

**Baking Soda Toothpaste** may assist in the removal of stains and decrease acidity in the mouth thus reducing the risk of developing tooth decay. The CDA seal of approval can be found on some of these products.

**ANatural≡ Toothpaste** may contain herbal extracts and no fluoride. These toothpastes are not recommended for children because of the lack of fluoride.