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Dental Health for Adults



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Dental Health for Adults

The dental scientist today is concerned with decay, the major cause of tooth loss in children, but he is equally concerned with an oral disease which strikes severely as people grow older.

Most adults don't lose their teeth to dental decay. Instead, their teeth are victims of a process that destroys the supporting structures. It is called periodontal disease.

Periodontal Disease: The Hidden Threat to Grown-up's Teeth

The word periodontal means literally "around the tooth." Periodontal disease is any disorder affecting the hard and soft tissues that surround the teeth and support them in proper relationship to each other.

In a healthy mouth, the teeth are supported by the gums, the jawbone in which the teeth are imbedded, the periodontal membrane that encircles the roots, and cementum covering the roots of the teeth.



The first stage of periodontal disease is the accumulation on teeth of a sticky film known as bacterial plaque. Bacteria in the plaque produce irritants which cause the gum tissues to become red, swollen, and likely to bleed. Later as the plaque continues to build up, the bacteria closest to the tooth die and may mineralize into a hard layer called calculus, which is covered by a layer of living bacterial plaque. Calculus is commonly called tartar. Tartar deposits are heaviest inside the lower incisors and outside the upper molars. This is be-

cause calcium salts are deposited by saliva and these two areas of the mouth are at or near the openings of the ducts from the salivary glands—where the saliva pours out.

Tartar collects on bridges and full or partial dentures as well as around natural teeth. At first, it is soft and can be removed by proper brushing. But as additional layers are formed, it becomes hard and is as difficult to remove from bridges and dentures as from natural teeth.

Tartar has very rough, rock-like edges, clearly seen under the microscope, which makes it easier for more plaque to accumulate on the teeth.

The gum and bone around your teeth can be seriously harmed by plaque if it is not removed daily with toothbrushing and flossing. Plaque will irritate the gums so that they will separate from the tooth, leaving open pockets in which more bacteria can accumulate. Pus can form, causing gums and bone to break down, thus destroying them. The waste products of the bacteria may cause an unpleasant odor or bad taste in the mouth.

Plaque is the most common cause of gingivitis (gum inflammation), but it does not always work alone. It can be aggravated by other mouth and general body diseases and conditions. Examples are diabetes, cardiovascular diseases, "Trench-mouth," and blood conditions. Vitamin deficiencies, although rare in the United States, may be an important cause of some gum disorders. Drugs for epilepsy can bring on periodontal problems.

Another major cause of periodontal disease is bad bite or malocclusion. When biting or occlusion is proper, teeth meet correctly for shearing, tearing, and grinding.

The teeth of your upper jaw should slightly overlap the teeth of the lower jaw. When the jaws open, close, and move sideways in chewing, your teeth should mesh properly without interference like the gears of an automobile transmission. If some teeth are poorly positioned, others will be subject to extra pressure or strain and may cause general breakdown of the gum and underlying bone structure.

At first, swollen or bleeding gums may cause little discomfort, occurring so gradually that one

may accept the situation as normal. Gingivitis (inflammation of the gums) can be neglected until it is quite advanced and serious.

If gingivitis goes untreated, your gums may recede even more from the teeth. Then the underlying tissues will start to deteriorate. In this condition, called periodontitis, the deeper deterioration is readily seen on x-ray films. The bony socket starts flattening out away from the teeth and soon the teeth become loose. Pockets fill with pus from infection, more bone is destroyed, and the condition continues to deteriorate. Inflammation and infection also can spread to the bone around neighboring teeth.

There is much that you—and your dentist—can do to prevent periodontal disease.

- Remove plaque daily from gums and teeth
- Provide proper nutrition
- Correct occlusion so teeth meet properly

Plaque removal

Brushing your teeth and gums regularly is a good defense against periodontal disease. Daily flossing between the teeth is also essential. Brushing and flossing removes plaque and retards calculus formations. In addition, it serves to cleanse and stimulate the gums. Properly done, it helps improve their blood circulation, color, toughness, and general health.

Brushing and flossing also helps eliminate small particles of food from the teeth and mouth. This denies bacteria food with which to work their damaging process on teeth and gums.

No one toothbrushing technique is best for everyone. A patient's own dentist can explain the method of toothbrushing best for him. One generally accepted method is:

Brush Outside of All Teeth (upper and lower)

Direct the bristle into the crevices between the teeth and under the gums at a 45-degree angle. Vibrate the bristles gently to dislodge the plaque and roll the bristles toward the chewing surface.



Brush Tongue-Side of Back Teeth (upper and lower)

Use the same motion here as on the outside surface of the teeth.



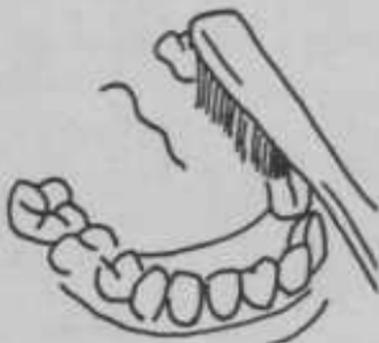
Brush Tongue-Side of Front Teeth (upper and lower)

Vibrate the bristles gently up and down. Put the bristles of the brush in crevices between the teeth and under loose gums—45-degree angle.



Brush Biting Surface of Back Teeth (upper and lower)

Apply bristles firmly to the surface and move brush back and forth with short scrubbing strokes. This helps remove plaque and may reach defects or deep crevices.



Brush Each Area at Least 10 Times

A soft toothbrush should be kept clean and in a place where it will dry. Toothbrushes should be replaced before the bristles become frayed or loose. No one can clean his teeth well with a worn-out toothbrush. It may injure the gums.

A good toothbrush should have:

- A flat brushing surface
- Soft, resilient bristles
- A head small enough to permit access to the surfaces of all teeth

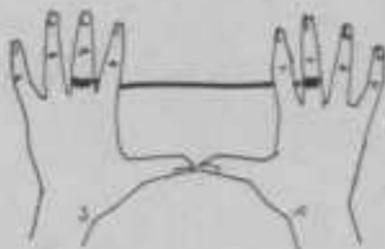
Young children need smaller brushes than those designed for adults.

It is advisable to use one of the toothpastes containing fluoride approved by the American Dental Association.

Dental Flossing

Toothbrushing cannot effectively clean between the teeth where dental decay and periodontal disease most frequently occur. Unwaxed dental floss is used to thoroughly clean this area. At least once a day, dental floss should be used between the teeth and behind the last tooth in the arch.

Use a piece of dental floss between one and two feet long; wrap the floss around the middle fingers.



To clean the upper teeth, pass floss over the thumb of one hand and the index finger of the other hand.



The thumb is to the outside of the teeth and helps guide the floss and retract the cheek while the index finger is to the inside, serving as a guide to bend the floss around the tooth and under gum tissues and to pull the floss tight against the tooth. Rub the floss up and down (not sideways) to remove the plaque and to polish the tooth surface. Clean the sides of each tooth in this manner.

To clean the lower teeth, hold the dental floss between the index fingers of both hands.

Suggestions for Dental Flossing

1. The fingers controlling the dental floss should be 1/2 to 1 inch apart.

2. Work the floss gently between the teeth. Do not snap the floss into position.

3. When the dental floss becomes frayed or soiled, a fresh section may be obtained by turning the dental floss from one middle finger to the other.

4. After flossing, rinse the mouth thoroughly to remove any loose food particles or plaque.

5. Use a systematic approach to insure complete cleaning of the teeth; i.e.

(a) Toothbrushing

(b) Flossing

(c) Check thoroughness of cleaning with disclosing tablets

Both children and adults can use red disclosing tablets (harmless vegetable dye) to show how well they are cleaning their teeth. These tablets are available at most drug stores. After brushing and flossing the teeth as thoroughly as possible, an individual should chew a disclosing tablet to check the condition of his teeth. If teeth have been cleaned properly, there will be no red color on the surface of the teeth. If the teeth have not been cleaned correctly, the plaque and the bits of food left on them will be colored bright red. The teeth should be cleaned until the red is completely gone. Those who are not able to clean their teeth effectively should ask a dentist for advice.

Irrigation devices, electric toothbrushes, toothpicks, and gum stimulators are sometimes used in addition to daily flossing and brushing. Remember that they are only an aid to oral hygiene and do not replace flossing and brushing. They should be used only upon professional advice.

Irrigation devices are usually used at home to flush away loose food particles that collect around the teeth and gums. The water spray will not remove the attached bacterial plaque.

Gum stimulators are designed to massage gum tissue between the teeth. They may be a toothpick with a special holder, a small wooden stick, or a rubber or plastic tip found on many toothbrushes.

Brushing and flossing plus other cleansing methods will do much to keep your teeth and gums

clean and keep tartar formation to a minimum. But it won't remove the calculus already formed and firmly attached to your teeth. This removal can be done properly only by the dentist or by a dental hygienist.

It's important that you visit your dentist regularly so that he can detect any gum irritation or periodontal disease while it is still at an early stage. If the periodontal disease is advanced, treatment is correspondingly more drastic—and more expensive. As with any illness, the earlier it is detected and treated, the better.

Oral Hygiene for Denture Patients

Oral hygiene practices do not stop with the loss of natural teeth. Cleanliness of dentures is important for a person's comfort and health. Dirty dentures can cause a sore mouth and "denture breath." Food, stains, and calculus (tartar) collect on dentures (false teeth) the same as they do on natural teeth.

Dentures and removable partials should be brushed after each meal and rinsed in cold running water before being replaced in the mouth. The mouth should be brushed with a soft nylon toothbrush and rinsed with warm water before replacing cleaned dentures.

Persons should wear their dentures during the day. However, it is recommended and especially desirable to remove the dentures each night to give a rest to the denture-supporting tissues (gums). When the dentures are left out of the mouth for any length of time, they should be *placed in water*. This practice will prevent drying and warping of the dentures.

Cleaning of the Soft Tissues

Gauze strips and pads may be most helpful for cleansing the soft tissues of the mouth, the ridges of the jaw of the edentulous patient (patient without any teeth), and also those patients with lost tooth spaces and those with chronic gum tissues when use of toothbrush may be contraindicated. The gauze should be wrapped around the index finger and pressed gently over the soft tissues of the mouth.

Cleaning Dentures

Remember—dentures are very fragile and costly to replace.

1. Fill the washbowl $\frac{1}{3}$ to $\frac{1}{2}$ full of water and hold dentures near surface of water. A washcloth at the bottom of the bowl will prevent denture from breaking if it is accidentally dropped.

2. With a denture brush, brush both inside and outside of denture.

3. Rinse with cold running water before replacing denture in *clean* mouth.

4. Metal clasps that fasten PARTIAL dentures to natural teeth need to be brushed thoroughly on inside of clasps to remove stains and food particles.

Stains and Odors

To remove stains and odors from dentures, soak denture overnight in glass of water with one teaspoon of laundry chlorine bleach (Clorox). DO NOT use pure bleach as pink base of denture may lose its color. DO NOT use Clorox solution on any appliance with metal as the metal may tarnish. **CAUTION:** If a bleaching agent is used, dilute and use WITH CARE as noted above.

Hard Deposits

To remove hard deposits on denture, soak denture overnight in WHITE vinegar. (Brown vinegar may stain the pink base of the denture.)

Denture cleaning aids are commonly available from drug, grocery, and variety stores. (However, the American Dental Association DOES NOT recommend the use of liquid denture cleaners that claim to be effective without the use of a brush.)

Nutrition

The food you eat has a lot to do with the health of your gums and bone. You need an adequate, well-balanced diet for general health and to insure proper bone formation and maintenance of healthy gums. Your body needs to be healthy in general if your mouth is to resist disease. Sticky candy and frequent intake of sweets should be avoided. They may become trapped between teeth, which results in rapid plaque formation and decay. Diet also may

affect tartar deposition. Soft, sticky foods encourage formation of plaque and tartar.

Occlusion

A growing number of American children appear to be affected by malocclusion or irregular teeth. It is impossible to attribute this condition to any one cause. It may be inherited, acquired, or both.

If a child inherits small bones from one ancestor and large teeth from another, malocclusion may result. Prolonged sucking, biting, or sleeping habits may exert undue pressures that result in facial deformity. The *too-early* loss of one or more primary (baby) teeth may cause other teeth to shift, thus reducing the space intended for the succeeding permanent teeth. If the prematurely lost tooth is a molar, the dentist may recommend the use of a device called a "space maintainer." Sometimes one or more primary teeth are retained too long. In such instances the dentist, aided by x-ray pictures, will determine the presence and state of development of the permanent tooth that is to replace it. The primary may be removed by the dentist.

When the child visits the family dentist regularly, he can detect the first signs of serious malocclusion in the teeth. He will advise you as to what corrective treatment is required and when it should be started. Your family dentist can handle most dental problems, but there are times when a specialist must be consulted. The orthodontist is a dental specialist in the prevention and corrections of irregularities of tooth position and formation. Orthodontic treatment used to be considered strictly for children, but more and more adults past the age of 30 have successfully undergone orthodontic treatment. Another dental specialist, the endodontist, may be needed to treat the dental pulp and abscessed teeth. There is much he can do to save the tooth—and your occlusion.

Research in Progress

Research is taking a hard look at periodontal disease. Some studies are aimed at discovering more about why gums become irritated. Dental scientists are seeking new surgical techniques for transplanting both soft pink tissue and healthy

bone to areas of the mouth which have been hopelessly ravaged by periodontal disease.

Other experiments are concerned with the kind of bacteria that live in inflamed gums. They are probing whether or not the body can be stimulated to the fine points of tooth contact pressures during biting and chewing. These experiments utilize miniature electronic transducers imbedded in teeth, which broadcast data to receivers in a laboratory.

Oral Lesions

Careful attention should be given to any abnormalities in the mouth (oral lesions). Some lesions require minimal treatment for healing. Others, such as oral carcinoma or cancer, can be very serious. It is important that they be observed by a dentist or physician.

Fever blisters, cold sores, and canker sores occur in a high percentage of the population. There is no specific treatment for these. Healing is usually spontaneous in 10-14 days.

Consult your dentist or physician at once if you have any of these signs:

1. Swelling, lump, or growth anywhere in or about the mouth.
2. Any sore that does not heal.
3. White scaly patches inside the mouth.
4. Numbness or pain without cause anywhere in the mouth area.
5. Repeated bleeding in mouth without apparent cause.
6. Persistent red or inflamed area.

Tooth Decay

The preventive techniques for periodontal disease also apply to tooth decay.

- Plaque Removal
- Nutrition
- Occlusion

In addition to these three methods, fluorides are an important preventive measure for tooth decay.

Fluorides

Adding fluoride to water to prevent tooth decay is called fluoridation. It is the most effective and least costly preventive dental health measure available. Thirty years of scientific research shows that fluoridation is safe and effective.

Children drinking fluoridated water from birth experience up to 65 percent fewer cavities. Fluoridation is good for adults too. Older people who have been drinking naturally fluoridated water all of their lives have substantially fewer decayed, missing, and filled teeth than people of the same age whose drinking water has had insufficient fluoride protection.

The High Price of Non-Fluoridation

Examinations of armed forces recruits have revealed that Oregonians have more cavities than recruits from most other parts of the nation. Only one out of 100 children raised in Portland has perfect teeth by the age of sixteen.

In Union Grove, Wisconsin, where the water is naturally sufficient in fluorides, the cumulative cost of repairing damage due to dental caries from birth to 16 was estimated to be an average of \$39. In the city of Madison, Wisconsin, *before* its water supply was fluoridated, similar cost over the same age period was estimated at \$183.

Even if you don't have children or your natural teeth, you'll still be affected by rising dental costs in the form of higher taxes to finance health programs. An investment in water fluoridation is a profitable way to meet the problem. Fluoridation reduces the hazards of both tooth decay and tooth loss—and it saves money. Everyone benefits—the individual, the family, the community.

Accepted and endorsed as a major public health measure by virtually every competent scientific and health organization in the world, community water fluoridation offers a safe method to improve oral health.

Topical Fluoride

Another effective preventive measure against decay is the topical (surface) application of fluoride solution to the teeth of children. The solution is applied to the surface of the teeth by a dentist or dental hygienist.

The Council on Dental Health recommends that in areas where the drinking water is deficient in fluoride, topical fluoride treatment should be used routinely in private dental offices and in school and community dental health programs.

Prescription Fluoride

If the drinking water supply does not contain sufficient fluorides, chewable fluoride tablets or drops are beneficial to children if they are taken every day throughout the entire time teeth are being formed—usually from birth until the child is eight to twelve years old. A physician or dentist must supervise an individual who takes fluoride tablets because the supplement must be adapted to the individual.

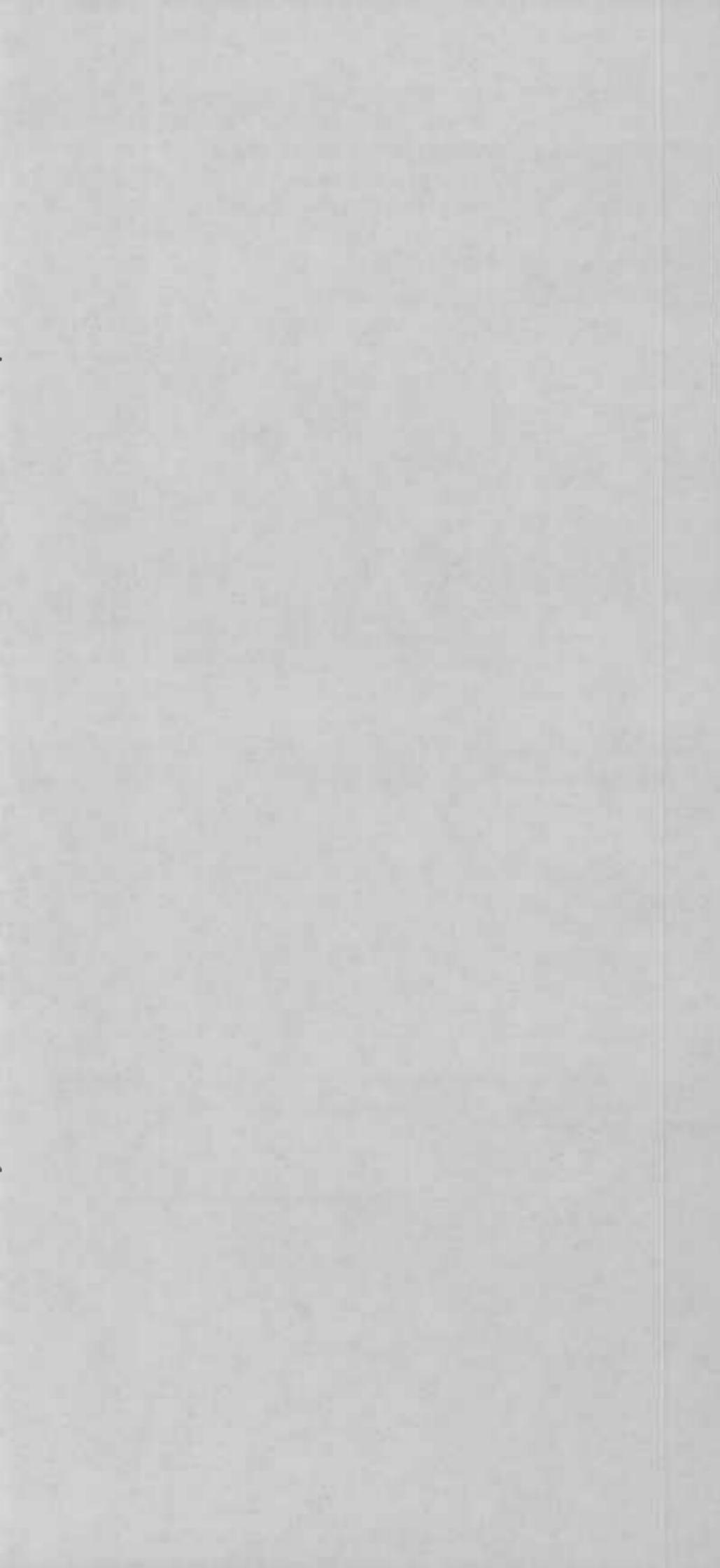
Fluoride Toothpastes

Some toothpastes containing fluoride have been recognized as effective decay-preventive dentrifices by the Council on Dental Therapeutics of the American Dental Association. These toothpastes have a copy of the recognition statement on their containers. However, none of these products can substitute for a community fluoridation program.

The fluoridation of public water supplies, the topical application of fluorides to the teeth, and the use of fluorides in other ways will not prevent all tooth decay. Although clearly helpful, they are partial preventives and not cure-alls. Regular professional care, good home care, and a balanced diet low in sweets are also needed for good dental health.

For Additional Information Contact:

1. Your state or local health department.
2. American Dental Association, 211 East Chicago Avenue, Chicago, Illinois 60611.



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