

What is Periodontal Disease?

If you were diagnosed with periodontal disease, you are not alone. Many others have the same problem. Treatment is the first step in preventing tooth loss.

The word periodontal means “around the tooth.” Healthy gum tissue fits like a cuff around each tooth. Where the gum line meets the tooth, it forms a slight v-shaped crevice called a sulcus. In healthy teeth, this space is usually three millimeters or less.

Periodontal diseases are infections that affect the tissues and bone that support teeth. As the tissues are damaged, the sulcus develops into a pocket that is greater than three millimeters.

Generally, the more severe the disease, the greater the pocket depth and bone loss. The enlarged pockets allow harmful bacteria to grow and make it difficult to practice effective oral hygiene. Left untreated, periodontal diseases may eventually lead to tooth loss.



How would I know if I had periodontal disease?

It's possible to have periodontal disease without apparent symptoms. That's why regular dental checkups and periodontal examinations are very important.

Several warning signs can signal a problem. If you notice any of the following, see your dentist:

- > Gums that bleed easily
- > Red, swollen, or tender gums
- > Gums that have pulled away from your teeth
- > Persistent bad breath
- > Pus between the teeth and gums
- > Loose or separating teeth
- > A change in the way your teeth fit together when you bite
- > A change in the fit of partial dentures

What causes periodontal diseases?

The mouth is filled with countless bacteria. Periodontal disease begins when certain bacteria in plaque (the sticky, colorless film that constantly forms on the teeth and the surfaces lining the mouth) produce toxins and enzymes that irritate the gums and cause inflammation. The resulting inflammation, which may be painless, can damage the attachment of the gums and bone to the teeth.

Good oral hygiene — brushing twice a day and flossing or using another interdental cleaner once a day — helps reduce the plaque film. Plaque that is not removed regularly can harden into rough porous deposits called calculus, or tartar. *Tartar is not the main cause of periodontal diseases, but the pores in tartar hold bacteria and toxins, which are impossible to remove even with regular brushing.* Once the hardened tartar forms, it can only be removed when teeth are cleaned at the dental office.

The periodontal-systemic disease interrelationships

Tooth loss is not the only potential problem posed by periodontal diseases. Research suggests that there may be a link between periodontal diseases and other health concerns such as diabetes, cardiovascular disease, stroke, bacterial pneumonia, and increased risk during pregnancy. Researchers are trying to determine if bacteria and inflammation associated with periodontal diseases play a role in affecting these systemic diseases and conditions.

Are you at risk?

There are several factors that increase the risk of developing periodontal disease:

- > Studies show that people who **smoke or chew tobacco** are more likely to have periodontal diseases. Tobacco users are much more likely than nonusers to develop plaque and tartar on their teeth. They also are more likely to have deeper pockets between their teeth and gums and greater loss of bone and tissue that support teeth. Periodontal treatment is also less successful in patients who continue to smoke.
- > **Systemic diseases**, such as diabetes, blood cell disorders, HIV infections, and AIDS can lower the body's resistance to infection, making periodontal diseases more severe. (Systemic diseases are those diseases that can affect the body as a whole.)
- > Many **medications** — such as steroids, some types of anti-epilepsy drugs, cancer therapy drugs, blood pressure drugs and oral contraceptives — can affect the gums. Some medications have side effects that reduce saliva. A lack of saliva can result in a chronically dry mouth, which can irritate the soft tissues. Update your medical history files at the dental office, to include all medications and any changes that occur in your health.
- > **Bridges** that no longer fit properly, crooked, crowded teeth, or fillings that have become defective may hold plaque in place and increase the risk of developing periodontal disease.
- > **Puberty, pregnancy, and oral contraceptives** change the body's hormone levels. This can cause gum tissue to become more sensitive to toxins and enzymes and can accelerate growth of some bacteria.
- > **Genetics** may play a role. Some patients may be predisposed to a more aggressive, severe type of periodontitis. Patients with a family history of tooth loss or who have parents wearing dentures should pay particular attention to their gums.
- > According to some studies, **periodontal disease may be passed from parents to children and between couples.** Research suggests that bacteria causing periodontal diseases are passed through saliva.

Types of Periodontal Diseases

There are many types of periodontal diseases and they can affect individuals of all ages from children to seniors.

Gingivitis is the mildest form of periodontal disease. It causes the gums to become red, swollen, and bleed easily. There is usually little or no discomfort at this stage. Gingivitis is reversible with professional treatment and good oral care at home.

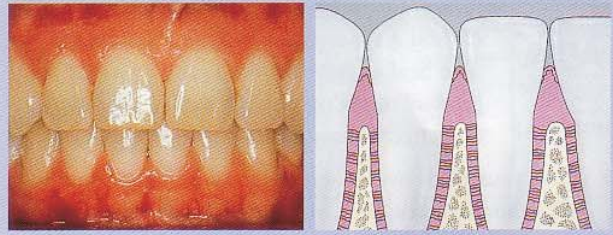
Chronic Periodontitis is a form of periodontal disease that results in inflammation within the supporting tissues of the teeth. Patients experience progressive loss of tissue attachment and bone. Chronic periodontitis is characterized by pocket formation and/or recession of gum tissue and is the most frequently occurring form of periodontitis. It is prevalent in adults, but can occur at any age. Progression of attachment loss usually occurs slowly, but periods of rapid progression can occur.

Aggressive Periodontitis is a highly destructive form of periodontal disease that occurs in patients who are otherwise clinically healthy. Common features include rapid loss of tissue attachment and destruction of bone. This disease may occur in localized or generalized patterns.

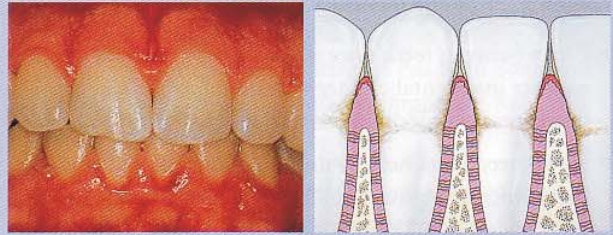
Periodontitis as a Manifestation of Systemic Diseases. This form of periodontitis is associated with one of several systemic diseases, such as diabetes. Patients who have rare but specified blood diseases or genetic disorders frequently show signs of periodontal diseases.

Necrotizing Periodontal Diseases are infections characterized by necrosis (death) of gingival tissues, periodontal ligament and alveolar bone. These lesions are most commonly associated with pain, bleeding, and a foul odor. Contributing factors can include emotional stress, tobacco use and HIV infection.

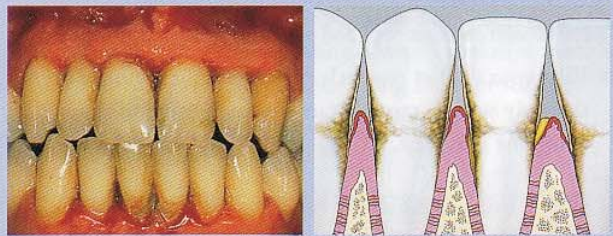
The Progress of Periodontal Diseases



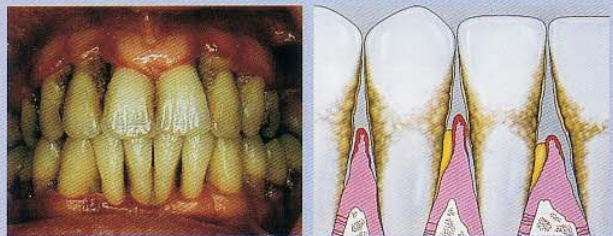
Healthy gingiva (gum tissue), periodontal ligament and bone anchor teeth firmly in place.



Gingivitis develops as toxins, enzymes, and other plaque byproducts irritate the gums, making them tender, swollen and likely to bleed easily.



Periodontitis occurs when plaque byproducts destroy the tissues that anchor teeth in the bone. As the disease progresses, pockets form, which allow more plaque to collect below the gum line. Tooth roots are exposed and become susceptible to decay and sensitive to cold and touch.



In advanced periodontitis, the teeth lose more support as the disease continues to destroy the periodontal ligament and bone. Unless treated, the affected teeth frequently become loose and may fall out or require removal by a dentist.

How can I prevent periodontal diseases?

A good oral hygiene routine practiced for a few minutes twice a day can help reduce your risk of developing periodontal diseases and tooth decay. When choosing dental care products, look for those that display the American



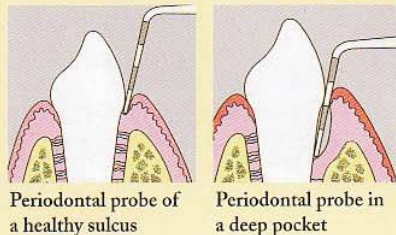
Dental Association's Seal of Acceptance. The Seal of Acceptance is your assurance the product meets the ADA's criteria for safety and effectiveness for its intended use.

- > Brush your teeth twice a day with a fluoride toothpaste. With thorough brushing, you can remove plaque from the inner, outer and chewing surfaces of each tooth. Your dentist or dental hygienist can show you a proper brushing technique.
- > Clean between teeth once a day with dental floss or another interdental cleaner to remove plaque and debris from areas your toothbrush can't reach.
- > If you need extra help controlling gingivitis and plaque that forms above the gum line, your dentist may recommend using an ADA-accepted antimicrobial mouthrinse or other oral hygiene aids as an effective addition to your daily oral hygiene routine.
- > Eat a balanced diet for good general health and limit snacks.
- > Visit your dentist regularly. Professional cleanings are the only way to remove tartar, which traps bacteria along the gum line.

Checking for Periodontal Diseases

During your dental checkup, the dentist examines your gums. This is called a periodontal examination. A periodontal probe is gently used to measure the depth of the sulcus surrounding each tooth. The depth of the healthy sulcus is usually three millimeters or less. The periodontal probe can indicate whether you have developed any pockets and the depth of those pockets.

Generally, the more severe the disease, the deeper the pocket.



Dental X-rays also may be taken to evaluate the amount of bone supporting the teeth and to detect other problems not visible during the clinical examination. If periodontal disease is diagnosed, the dentist may provide treatment or may refer you to a periodontist, a dentist who specializes in the prevention, diagnosis and treatment of periodontal diseases.



Radiograph showing periodontal bone loss.

Treating Periodontal Diseases

Periodontal treatment methods depend upon the type and severity of the disease. If the disease is caught very early (when it is gingivitis), and no damage has been done, you may simply be given instructions on improving your daily oral hygiene.

Even with these measures, some patients develop more severe periodontal disease that must be treated. The first step usually involves a special cleaning, called scaling and root planing. This procedure removes plaque and tartar deposits on the tooth and root surfaces. This helps gum tissue to heal and pockets to shrink, which makes it more difficult for plaque to accumulate along the root surfaces. This is sometimes referred to as "periodontal" or "deep cleaning" and may take more than one visit.

A local anesthetic may be given to reduce any discomfort. Using an instrument called a small scaler or an ultrasonic cleaner, plaque and tartar are carefully removed down to the bottom of each periodontal pocket. The tooth's root surfaces are then smoothed or planed.

Your dentist also may recommend medications to help control infection and pain, or to aid healing. These medications could include a pill, a mouthrinse, or a substance that the dentist places directly in the periodontal pocket after scaling and root planing. Your dentist may also stress the need to control any related systemic disease, like diabetes.

At the next visit, the dentist checks the pocket depth to determine the effect of the scaling and root planing. If the disease has advanced to the point where the periodontal pockets are deep and the supporting bone is lost, additional treatment may be necessary. You may be referred to a periodontist.

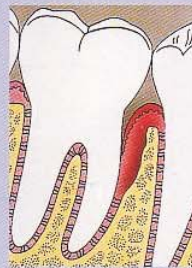
Periodontal Surgery

When deep pockets develop, it is difficult to completely remove plaque and tartar even with thorough daily oral hygiene. If the pockets do not heal after scaling and root planing, periodontal surgery may be needed to reduce the pocket depth and make teeth easier to keep clean.

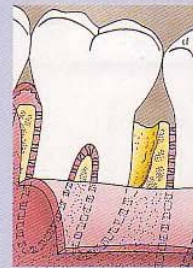
Surgery allows the dentist to access hard-to-reach areas that require the removal of tartar and plaque. The gums are sutured back into place or into a new position to make tissue snug around the tooth.

Bone surgery, including bone grafts, may be used to rebuild or reshape bone destroyed by periodontal disease. Splints, bite guards or other appliances may be used to stabilize loose teeth and to aid the regeneration of tissue during healing. If excessive gum tissue has been lost, a gum graft may be performed.

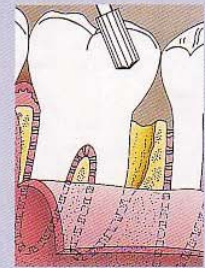
After surgery, the dentist may apply a protective dressing over teeth and gums and a special mouth rinse may be recommended or prescribed. An antibiotic and mild pain reliever also may be prescribed.



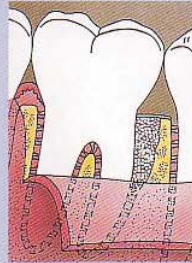
Presurgical bony defect.



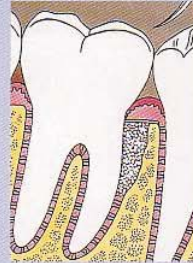
Flap incision accesses bone.



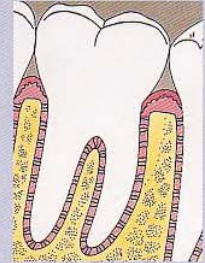
If necessary, bone is contoured.



In some cases the bone will be rebuilt with a bone graft.



Gum is sutured.



Gum healed into new position

Prevention

Once your periodontal treatment is completed, your dentist will want to see you at regular intervals. In some cases, your appointments may alternate between your general dentist and a periodontist. Your dentist may recommend more frequent checkups.

Daily cleaning helps keep the plaque biofilm under control and reduces tartar buildup. Have your teeth cleaned regularly at the dental office to reduce the plaque biofilm and remove calculus from places your toothbrush and floss may have missed. Paying special attention to your teeth and gums and scheduling regular dental checkups are critical to keeping periodontal disease under control.

If you use tobacco, ask your dentist or physician for information about how to successfully stop the habit. Tobacco contains chemicals that can slow the healing process and make the treatment results less predictable.

Good oral hygiene at home is essential to help keep periodontal disease from becoming more serious or from recurring. It just takes a few minutes twice a day to care for your teeth and gums.

You don't have to lose teeth to periodontal disease. Brush, clean between your teeth, eat a balanced diet, and schedule regular dental visits for a lifetime of healthy smiles.