



Carnegie Dental Group

What Is Periodontal Disease?

Periodontal disease is an infection of the tissue that support your teeth.

Your gum tissue is not attached to your teeth as high as it may seem-there is a very shallow v-shape crevice called a sulcus between the tooth and gums.

Periodontal disease attack just below the gum line in the sulcus, where they cause the attachment of the tooth and its supporting tissue to break down. As the tissues are damaged, the sulcus develops into a pocket. Generally, the more severe the disease, the greater the depth of the pocket.

What causes periodontal diseases?

The sticky film that constantly forms on your teeth is called *plaque*, and is made mostly of bacteria. Some of these bacteria produce byproducts (called *toxins* or *enzymes*) that can irritate the tissues that support your teeth. These byproducts can damage the attachment of the gums, periodontal ligament, and bone of your teeth.

You can remove plaque with good oral hygiene – brushing your teeth twice a day and cleaning between them once a day with floss or another interdental cleaner. When plaque is not removed through good oral hygiene, it builds up along the gum line and increases your risk of developing periodontal disease.

Plaque that is not removed regularly can harden into rough porous deposit called *calculus* or *tartar*. Tartar itself does not seem to cause disease, but it may make it more difficult for you to remove plaque, so it should be removed regularly. Tartar only can be removed when your teeth are professionally cleaned in the dental office.

Do some factors increase the risk of periodontal diseases?

Yes, some factors can increase the risk of developing periodontal diseases. If one or more of the following apply to you, it is especially important that you follow dentist's advice to maintain healthy teeth.

- People who smoke or chew tobacco are more likely to have periodontal disease, it is also more likely to be more severe than those who do not use any tobacco products.
- Some systematic diseases, such as diabetes, can lower your body's resistance to infection, making periodontal diseases more severe.
- Many medications, such as steroids, some types of anti-epilepsy drugs, cancer therapy drugs, some calcium channel blockers, and oral contraceptives can affect the gums. In addition, medications that reduce your salivary flow (such as Asthma medication) can result in chronically dry mouth, which can irritate your oral soft tissues. Let your dentist know about your medications and update your medical history files at the dental office when any changes occur.
- Bridges that no longer fit properly, crooked teeth or fillings that have become defective can contribute to plaque retention and increase your risk of developing

- Pregnancy or use of oral contraceptives increases hormone levels that can cause gum tissue to be more sensitive to the toxins and enzymes produced by plaque and can accelerate growth of some bacteria. The gums are more likely to become red, tender and swollen, and bleed easily.

How would I know if I had periodontal disease?

It is possible to have periodontal disease and have no warning sign. That is one reason why regular dental checkups and periodontal examination are very important.

However, several warning signs can signal that you have a problem with periodontal disease. 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 the teeth;
- Pus between the teeth when the gums are pressed;
- Persistent bad breath or bad taste;
- Permanent teeth that are loose or separating;
- Any change in the way your teeth fit together when you bite;
- Any change in the fit of partial denture.

Type Of Periodontal Diseases

Periodontal diseases are classified according to the severity of the disease. The two major stages of the disease are gingivitis and periodontitis.

- **Gingivitis**

Gingivitis is a milder and reversible form of periodontal disease that only affects the gums. It develops as toxins in plaque irritate gums, making them red, tender, swollen, and likely to bleed easily. It can usually be eliminated by daily brushing, cleaning between your teeth, and regular dental cleaning.

- **Periodontitis**

Gingivitis may lead to more serious, destructive form of periodontal disease, called periodontitis. There are several forms of periodontitis, with the most common being chronic adult periodontitis.

Periodontitis occurs when toxins, enzymes, and other plaque byproducts destroy the tissue that anchor teeth into the bone. The gum line recedes, which can expose the tooth's root. Exposed roots can become susceptible to decay and sensitive to cold and touch.

As we mentioned earlier, the sulcus deepens into a pocket in the early stages of periodontal disease. Plaque that collects in these pockets can be difficult to remove during regular brushing and interdental cleaning. Byproducts from the plaque that collect in these pockets can continue to damage the gum, periodontal ligament and bone. In some cases, so much ligament and bone are destroyed that the tooth becomes loose. Usually, your dentist can still treat the disease at this point. In the worst of cases, a loose tooth may need to be extracted or may fall out on its own.

How can I prevent periodontal disease?

Daily good oral hygiene can help reduce your risk of developing periodontal disease.

Brushing your teeth twice a day. With proper 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.

Using a fluoride-containing toothpaste also help protect your teeth against cavities.

Carefully clean between your teeth once a day with dental floss or another interdental cleaner to remove plaque from areas your toothbrush can't reach. It only takes a few minutes each day and it's just as important in maintaining oral health as brushing your teeth.

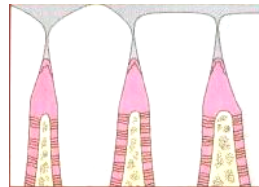
If you need extra help controlling gingivitis and plaque that forms above the gum line, your dentist may recommend using an ADA- accepted antimicrobial mouthrinse or other oral hygiene aids as an effective addition to your daily oral hygiene routine.

When choosing dental care products, look for those that display the Australian Dental Association's seal of acceptance- your assurance that they have met ADA standards of safety and effectiveness.

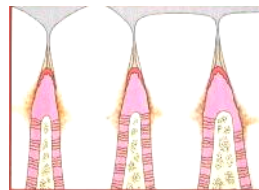
Eat a balanced diet for good general health.

Visit your dentist regularly

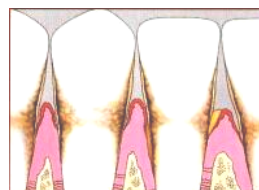
The Progress of Periodontal Disease



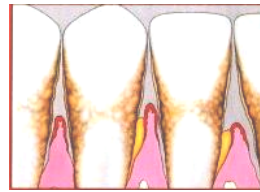
Healthy gingival (gum tissue), periodontal ligament and bone anchor teeth firmly in place.



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



Periodontitis occurs when plaque byproducts destroy the tissue that anchor your 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.

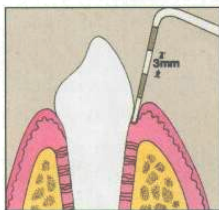


In advanced periodontitis, the teeth lose more support as the disease continues to destroy the periodontal ligament and bone. Unless treated, the affected teeth frequently become loose and may fall out or require removal by a dentist.

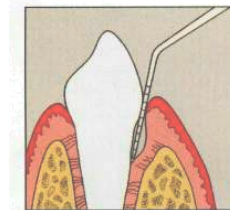
Checking for Periodontal Disease

During your checkup, the dentist will examine your gums. This is called a periodontal examination. He or she will use an instrument called a periodontal probe to gently measure the depth of the sulcus surrounding each tooth. The healthy sulcus depth is usually three millimeter or less.

Periodontal diseases cause the sulcus (the shallow v-shaped crevice between your teeth and gum) to deepen into a pocket. A periodontal probe can determine whether you have developed any pockets. Generally, the more severe the disease, the deeper the pocket.



Periodontal probe of healthy gums.



Periodontal probe showing pockets.

Dental X-rays, or radiographs, also may be taken to evaluate the amount of bone supporting the teeth and to detect other problems not visible during 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 treatment of periodontal disease.



Radiograph showing periodontal bone loss.

How is Periodontal Diseases Treated?

Treatment methods depend upon the type of disease and how far the condition has progressed.

The first step usually is a thorough cleaning that includes scaling to remove plaque and tartar deposits. The tooth roots also may be planed to smooth the root surface, allowing the gum tissue to heal and reattach to the tooth. In some cases, the occlusion, or bite, may require adjustment.



Subgingival scaling.
Cleaning the tooth
below the gum.



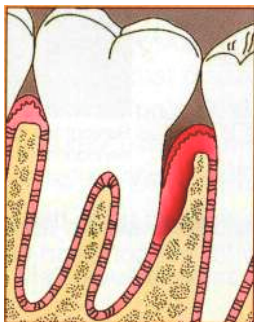
Root planing. Smoothing
the tooth root.

Your dentist also may recommend medications to help control infection, pain, or to encourage healing. These medications can be given in various forms: a pill that you would swallow, a liquid mouthrinse, or in a form that the dentist could place directly in the periodontal pocket after scaling and root planing.

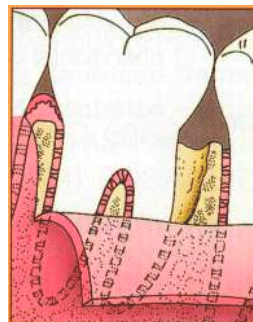
Is surgery sometimes needed?

When deep pockets between teeth and gums (4 to 6 millimeters or deeper) are present, it is difficult for the dentist to thoroughly remove the plaque and tartar. Likewise, you may have trouble keeping these pockets clean and free of plaque.

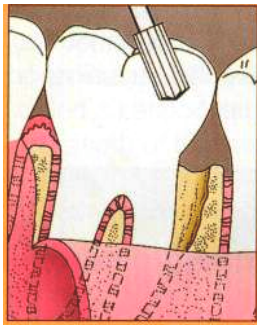
Periodontal Surgery



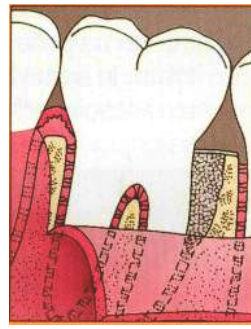
1. Pre-surgical bony
defect.



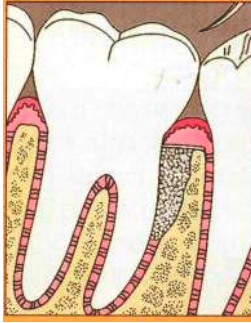
2. Flap incision accesses
Bone.



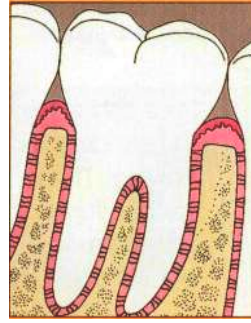
3. If necessary, bone is contoured.



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



5. Gum is sutured



6. Gum healed into new position.

If the pockets do not heal after scaling and root planing, periodontal surgery may be needed. One of the goals of periodontal surgery is to reduce the depth of the periodontal pockets to make it easier to keep clean.

With surgery, the dentist can access hard to reach areas that require the removal of tartar and plaque. The tooth roots are cleaned and smoothed. Sometimes the bone around the tooth also is smoothed to help remove these pockets. The gums then are sutured back into place or into a new position that will be easier to keep clean at home.

Bone surgery may be used to rebuild or reshape bone that has been destroyed. Grafts of the patient's bone or artificial bone may be used, as well as special membranes. The dentist may use splints, bite guards or other appliances to stabilize loose teeth and to aid the regeneration of tissue during healing.

If excessive gum tissue has been lost from the tooth root (gum recession), a gum graft may be performed.

After surgery, the dentist may apply a protective dressing over teeth and gums. An antibiotic and mild pain reliever may be prescribed.

How do I prevent periodontal disease from recurring?

Good oral hygiene at home is essential to help keep periodontal disease from becoming more serious or recurring. Your dentist also will want to see you at regular intervals. You may need to schedule more frequent visits than you have in the past.

You do not 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 smile.