

# Periodontal Disease

## What is Periodontal Disease?

Periodontal disease (pyorrhea) or gum disease is a chronic inflammation and infection of the gums and surrounding tissue. This results in the loss of bone surrounding the roots of the teeth.

## I Don't Have Any Pain!

Periodontal disease is usually painless, and may develop slowly or progress quite rapidly. Unless you have regular dental checkups, you may not be aware you have periodontal disease until your gums and bone have been so seriously damaged that tooth loss is inevitable.

## Is It Common?

Yes, some form of periodontal disease affects more than half of people over the age of 18 and 3 out of 4 adults over the age of 35.

## Does It Start All Of A Sudden?

Except for some childhood forms or isolated trauma (e.g. popcorn hull), most periodontal disease does not start all of a sudden. However, diagnosis may seem sudden because there is a point at which the breakdown of the tissues (increasing pocket depth and bleeding). There also seems to be some cyclical factors, which affect the severity of the disease.

## How Do You Know I Have Periodontal Disease?

The disease is diagnosed by measuring the depth of the pockets around the teeth, noting inflammation (usually bleeding), and taking x-rays to determine if the bone has been affected (and if so, in what areas).

## How did I get this?

Bacterial plaque - a sticky, colorless film that constantly forms on the teeth - is recognized as the primary cause of periodontal disease. If plaque is not removed each day by brushing and flossing, it hardens into a rough porous substance called calculus (also known as tartar). Toxins (poisons) produced and released by bacteria in plaque irritate the gums. These toxins cause the breakdown of the fibers that hold the gums tightly to the teeth, creating periodontal pockets, which fill with even more bacteria and toxins. As the disease progresses, the pockets extend deeper and the bacteria moves down until the bone that holds the tooth in place is destroyed. The tooth will eventually fall out or require extraction.

## Bacterial Culprits

In the healthy mouth, more than 350 species of microorganisms have been found. Periodontal infections are linked to fewer than 5% of these species. Healthy and disease-causing bacteria can generally be grouped into two categories:

- The harmless or helpful bacteria are usually known as *gram-positive aerobic bacteria*.
- In periodontal disease, the bacterial balance shifts over to *gram-negative anaerobic bacteria*. Inflammatory disease and injury cannot develop without these bacteria.

Following are some of the bacteria most implicated in periodontal disease and bone loss:

- *Actinobacillus actinomycetemcomitans* and *Porphyromonas gingivalis*. These two bacteria appear to be particularly likely to cause aggressive periodontal disease. In one study, both *P. gingivalis* and *A. actinomycetemcomitans*, along with multiple deep pockets in the gum, were associated with resistance to standard treatments for gum disease. In another study, *P. gingivalis* doubled the risk for serious gum disease. Particularly virulent strains of this bacterium may be responsible for periodontal disease. A 2001 study suggests that the *P. gingivalis* produces enzymes, such as one called arginine-specific cysteine proteinase, which may be the specific destructive factors that disrupt the immune system and lead to subsequent periodontal connective tissue destruction.
- *Bacteroides forsythus* is also strongly linked to periodontal disease.
- Other bacteria associated with periodontal disease are *Treponema denticola*, *T. socranskii*, and *P. intermedia*. These bacteria, together with *P. gingivalis*, are frequently present at the same sites, and are associated with deep periodontal pockets.

Some bacteria are related to gingivitis, but not plaque development. They include various streptococcal species.

[http://www.umm.edu/patiented/articles/what\\_causes\\_periodontal\\_disease\\_000024\\_3.htm](http://www.umm.edu/patiented/articles/what_causes_periodontal_disease_000024_3.htm)

#### **Other Factors:**

- \* Heredity- most people seem to inherit some predisposition to periodontal disease
- \* Physical and chemical irritants such as food and tobacco
- \* Poorly fitting bridges, malocclusion (badly aligned teeth), or defective restorations (fillings)
- \* Poor diet
- \* Pregnancy or use of oral contraceptives
- \* Systemic diseases (especially those affecting the immune system) such as AIDS or diabetes
- \* Some Medications
- \* Stress may also be a contributing factor
- \* All factors are not known and their influence may vary from person to person and at different times

#### **Warning Signs:**

- \* Red or swollen gums
- \* Bleeding from the gums
- \* Gums that pull away from teeth
- \* Loose or separating teeth
- \* Puss between the gum and tooth
- \* Persistent bad breathe
- \* Food debris collects between teeth
- \* Overgrown gums
- \* A change in the way teeth fit together when biting
- \* There may be NO PAIN until the disease has spread to a point where the tooth is unsalvageable