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.