

Periodontal disease

What is periodontal disease?

Periodontal diseases and pathological conditions are diseases affecting the supportive tissue of the teeth, namely the bone that supports the teeth and the gingiva (gums).

The principal periodontal diseases are gingivitis and periodontitis. Gingivitis is an inflammation of the gums around the teeth. It is a reversible condition when treated. In contrast, periodontal disease is a serious condition that causes deterioration of the gums and the bone supporting the teeth.

Periodontal diseases are infections caused by the accumulation of pathogenic (disease-causing) bacteria and their toxins in the gingival crevice, the narrow 1 to 3 mm furrow between the teeth and the gums. These diseases can be worsened by various factors, principal among them the accumulation of tartar, smoking, genetic influences, stress and certain medical conditions such as diabetes, as well as the use of certain medications.

The most effective ways of preventing these diseases are meticulous oral hygiene including the use of dental floss, not smoking and regular visits to the dentist for frequent cleanings.

Periodontitis is characterized by the loss of bony support for the tooth and by detachment of the gums around the tooth, leading to the formation of "periodontal pockets" (**Fig. 1**). While periodontitis is often asymptomatic, the main signs patients notice are bleeding, swelling and receding of the gums, tooth migration and, occasionally, bad breath (**Fig. 2**). As the disease progresses, the teeth become loose. If periodontitis is untreated, teeth may fall out.

Periodontal diseases are diagnosed during dental checkups using a test called "PSR," short for Periodontal Screening and Recording. This simple and rapid procedure allows the dentist to identify patients affected by periodontal disease. Based on the results, your dentist will make the appropriate recommendations to you. When periodontal disease is confirmed, the dentist will do a more complete examination of your periodontal tissues in order to evaluate the gingival characteristics: shape, color, texture, as well as the quantity and quality of the gum tissue. The depth of the pockets between the teeth and the gums and the amount of migration is measured. Radiological examinations are required to complete the evaluation of the periodontal bone. This comprehensive evaluation allows a diagnosis to be made, to identify causative factors and, finally, to establish an appropriate treatment plan for the condition of your gums leading to the improvement of your dental health.

What steps are involved in periodontal treatment?

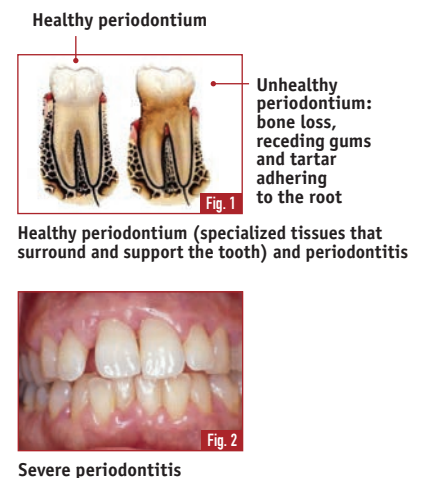
Generally, treatments begin with a phase that addresses the causes of periodontal disease. This consists of eliminating the irritating factors – bacterial plaque and tartar – and correcting the factors contributing to their accumulation. Habits that can aggravate the disease should be modified. A treatment called scaling and root planing is utilized to clean the periodontal pockets. This treatment is normally conducted with local anaesthesia using manual and ultrasonic instruments. In some situations, supportive antibiotic therapy may be recommended. In the days following this treatment, the patient may feel more sensitivity when chewing or brushing, as well as to temperature changes. After the gingival inflammation has been resolved, the gums will contract and become firmer, which may lead to an increased exposure of the roots thereby giving the appearance that the teeth are longer. Particular care must be given to the quality of daily oral hygiene in order to prevent root cavities, because the roots are less resistant to cavities than the enamel on the tooth itself. To treat the increased sensitivity of the teeth to hot and cold, your dentist may prescribe a toothpaste formulated to reduce sensitivity and apply a desensitizing agent if needed.

This phase of treatment generally stops the progression of the disease and reduces inflammation of the gums, as well as reducing the depth of the periodontal pockets. In the following weeks, your dentist will re-evaluate your periodontal condition to measure how much improvement has been achieved.

After this phase of treating the causes of periodontal disease, some teeth may need periodontal surgery. This surgery allows the dentist to have access to the roots that have deep periodontal pockets and undertake a complete debridement. This procedure gives the gums and the bone a more natural shape, helping to further decrease the depth of the periodontal pockets and, in so doing, facilitates the patient's dental hygiene. There are regenerative techniques that may also be attempted, depending on the situation. These procedures use various materials that promote new bone formation in order to partially replace the loss caused by periodontal disease. These techniques require specific conditions for clinical application; your dentist may recommend them if they are indicated for your periodontal condition.

Surgical procedures have notable treatment benefits, but they do involve a healing period.

It should be noted that there is a risk of recurrence or aggravation of your periodontal condition in spite of all the treatments provided.



Gingival grafts

Receding gums may be caused by many factors, including overly vigorous brushing and periodontal disease. Teeth which naturally have very thin gingiva are at greater risk for receding gums. This leads to the loss of gingival and bone tissue and the consequent exposure of the tooth root (**Fig. 3**). With receding gums, it is very important to identify and correct the causative factors. Subsequently, a gingival graft may be indicated to stop the process of gum recession and to prevent additional loss of gingival and bone tissue.

Gingival grafts are used to restore the band of gingiva that was lost due to receding gums. In certain specific cases, it may be possible to partially or totally re-cover the exposed root.

This procedure is usually done by harvesting tissue from your palate and grafting it where the lack of gingiva has been identified.



Receding gums

Crown lengthening

In some situations, there is too much gingiva. A “gummy smile” showing a great deal of gingiva may be caused by an excess of gingiva covering an abnormal amount of your tooth surface, making the teeth appear too short (**Fig. 4**). Other situations, such as a deep cavity, a tooth broken at the gum line or when the length of the tooth structure is insufficient to allow a crown or a bridge to be made, can compromise the restoration of a tooth.

This condition can be corrected by a procedure called crown lengthening. The goal of this surgery is to adjust the level of the gingiva and the bone in order to expose more of the surface of the tooth and to give it the appearance of normal length, or to allow an adequate restoration (**Fig. 5**).



Crowns appear too short



The same crowns after a crown lengthening procedure

Risks and possible complications of periodontal surgery:

- Pain.
- Bruising or swelling in the surgical area.
- Infection.
- Postoperative bleeding.
- Undesirable reactions to medication.
- Temporary loss of feeling in the surgical area.
- Teeth that appear long.
- Sensitivity of teeth to hot and cold.
- Loss of gingival papilla (cone-shaped pad of gingiva between the teeth).
- Graft loss.

How to keep your gums healthy

Periodontal diseases may recur if their initial cause returns. That is why it is very important to adhere to a maintenance program that includes regular visits to your dentist at the recommended intervals. It is also essential to maintain high standards of dental hygiene. Both your dentist and dental hygienist can help you to prepare a personalized dental hygiene program specific to your condition, including good brushing techniques and the daily use of dental floss. By controlling the amount of plaque and tartar adhering to your teeth, you will greatly minimize the risk of recurrence of the disease.

Nevertheless, for periodontal treatment that is required to curtail periodontal disease, it is important that the treatment be administered by a skilled practitioner, either a dental surgeon or a periodontist.

Informed consent

Your prognosis is: Good Average Unfavorable

Informed consent is the result of a discussion between the patient and the dentist. This document is provided for information purposes and may be completed or modified during discussions with your dentist. Some dentists may provide adequate information without giving this document to the patient.

Explanations

Informed consent for a periodontal treatment

I understand the nature and the limits of the periodontal treatment needed to treat my periodontal condition, _____, as well as the difficulties related to my treatment. I understand that, even if at the beginning the prognosis is good, it is always possible that one of the complications mentioned above for _____ may occur.

I also understand that periodontal diseases may recur if their initial cause returns. That is why it is very important that I adhere to a maintenance program that includes regular visits to my dentist at the recommended intervals. It is also essential that I maintain high standards of dental hygiene. Both your dentist and dental hygienist can help you to prepare a personalized dental hygiene program specific to your condition, including good brushing techniques and the daily use of dental floss. By controlling the amount of plaque and tartar adhering to your teeth, you will greatly minimize the risk of recurrence of the disease.

I have discussed all of the foregoing with my dentist and he/she has answered all of my questions. I hereby consent to the treatment.

Patient's signature

Date

Dentist's signature

Date