



**THE AMERICAN ACADEMY
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DIABETES PERIODONTAL DISEASES



DIABETES AND PERIODONTAL DISEASES:
A TWO-WAY RELATIONSHIP

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The American Diabetes Association defines diabetes as a serious disease in which the body does not produce or properly use insulin. Insulin is a hormone that is needed to convert sugar, starches and other food into energy needed for daily life. Approximately 18.2 million Americans have diabetes; however, 5.2 million of them have not been diagnosed.

If you or someone you know has diabetes, you already understand that it is important for diabetic patients to monitor the status of their disease and keep it under control with diet and exercise. However, you may not know that good oral health not only keeps the mouth and gums free from infection, but also might have a significant impact on the control of diabetes.

• IMPORTANCE OF ORAL HEALTH • TO DIABETIC PATIENTS

Periodontal diseases (also known as gum disease) are bacterial infections that, left untreated, may cause damage to the bone and even tooth loss. Diabetic patients are three-to-four times more likely to develop these types of chronic periodontal infections, which, like any other infection in the body, can impair their ability to process and/or utilize insulin. Infections may cause diabetes to be more difficult to control, and the infection may be more severe than someone without diabetes.

Diabetic patients tend to have a higher incidence of periodontal diseases, more severe levels of bone loss and periodontal infection, and often experience acute episodes of more aggressive disease activity, ultimately leading to the loss of teeth. Tooth loss can make it difficult to chew and digest food. For diabetic patients, this can have a devastating impact on the ability to maintain proper nutrition and control of the blood sugar levels.

• A TWO-WAY RELATIONSHIP •

Just as diabetes can increase a patient's chance of having periodontal diseases, research suggests that periodontal diseases may make it more difficult for people who have diabetes to control their blood sugar. Periodontal diseases increase the body's systemic inflammatory signals that serve to increase blood sugar. This contributes to increased periods of time when the body functions with an unhealthy blood sugar level. Consequently, it is important for diabetic patients to treat periodontal diseases to eliminate the infection for optimal metabolic control.

• PERIODONTAL DISEASES •

Periodontal diseases are bacterial infections of the gums, bone and attachment fibers that support the teeth and hold them in the jaw. The main cause of the diseases is bacterial plaque, a sticky, colorless microbial film that constantly forms on your teeth. If the plaque is not removed everyday by brushing and flossing, it anchors onto your teeth as a rough, porous substance known as calculus or tartar. Toxins (or poisons) produced by the bacteria in plaque irritate the gums, causing infection.

• COMMON SIGNS OF • PERIODONTAL DISEASES

BLEEDING GUMS



Red and swollen gums that bleed, often during brushing or flossing.

RED, SWOLLEN OR TENDER GUMS



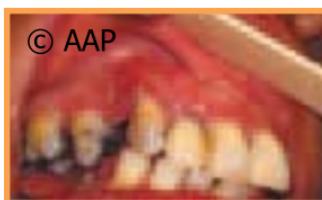
Gums that are red, swollen or tender to the touch.

RECESSION



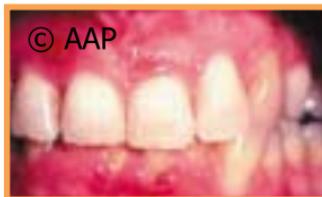
Gums that have pulled away from the teeth, leaving more of the crown of the tooth exposed and eventually some amount of the tooth root.

PLAQUE



Milky white or yellowish plaque deposits, which are usually heaviest between teeth.

ABSCESS



Pus between the teeth and gums accompanied by symptoms such as tenderness and swelling in the gum area. Acute abscesses can be very painful and cause rapid and extensive tissue destruction.

PERSISTENT BAD BREATH/ BAD TASTE

A foul, offensive odor from the oral cavity.

• OTHER ORAL CONDITIONS •

In addition to increased susceptibility to periodontal diseases, diabetic patients, especially uncontrolled patients, may experience other oral conditions such as:

- **Burning Sensation in the Mouth or on the Tongue**

- A common complaint among uncontrolled diabetic patients.

- **Dry Mouth**

- A decreased or diminished flow of saliva can cause soreness, ulcers, infections (such as periodontal diseases) and tooth decay.

- **Delayed Wound Healing**

- Any type of wound usually takes longer to heal in diabetic patients than in non-diabetic patients.

• PREVENTING PERIODONTAL DISEASES •

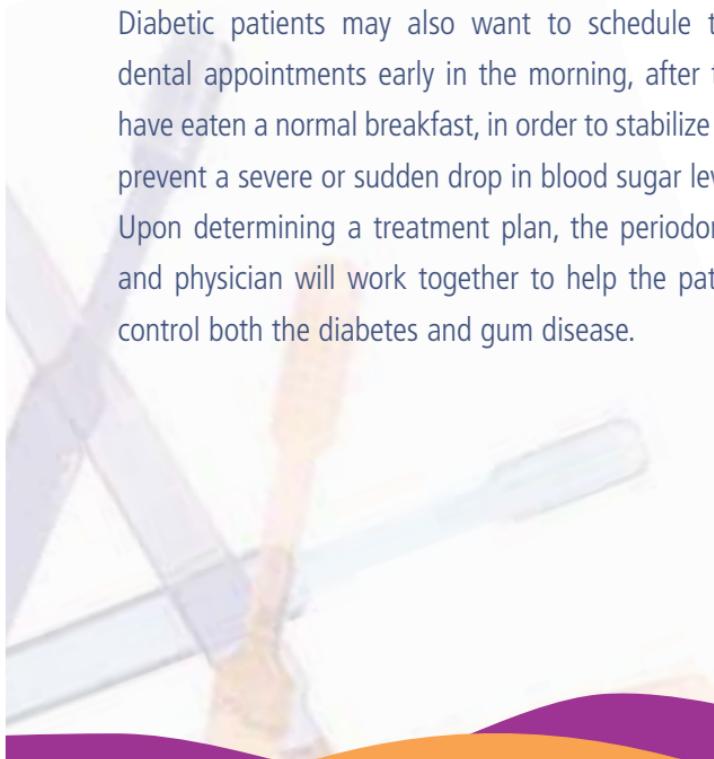
You must remove the plaque from your teeth and gums everyday by brushing and flossing, or in another manner prescribed by your dentist or hygienist. Regular dental visits are also important. Daily cleaning will keep plaque and calculus formation to a minimum, but won't completely prevent it. A professional cleaning at least twice a year is necessary to remove accumulated deposits from places your toothbrush, floss and other cleaning aids may have missed. If you've been treated for periodontal diseases, you may need professional cleanings more frequently.

Keeping diabetes under control will also make patients less likely to develop periodontal diseases. Studies have concluded that poorly controlled diabetic patients respond differently to bacterial plaque at the gum line than well controlled diabetic patients. Poorly controlled patients with diabetes also have more destructive inflammatory activities in their gum tissue causing more severe loss of gums, bone and teeth.

• TREATMENT OPTIONS •

Periodontal disease is the sixth leading complication of diabetes; therefore, it is important for diabetic patients to know their treatment options. If detected early, a periodontist can provide treatment that may arrest gum disease and bring the gums back to a state of health, preventing additional bone or tooth loss. In fact, periodontal treatment combined with antibiotics has been shown to improve blood sugar levels in diabetic patients as well, suggesting that treating patients' periodontal diseases could decrease insulin requirements.

If the diabetes is well controlled, periodontal treatment will be similar to a non-diabetic patient's treatment. In the early stages of gum disease, treatment usually involves scaling and root planing, a procedure in which plaque and calculus are removed from the pockets around the tooth and the root surfaces



are smoothed. More advanced cases may require further treatment. However, patients who are having problems keeping their diabetes under control may require a tailored treatment plan, as some diabetics heal more slowly.

Diabetic patients may also want to schedule their dental appointments early in the morning, after they have eaten a normal breakfast, in order to stabilize and prevent a severe or sudden drop in blood sugar levels. Upon determining a treatment plan, the periodontist and physician will work together to help the patient control both the diabetes and gum disease.

• QUESTIONNAIRE •

To help your periodontist accurately determine a treatment plan, you will want to supply them with the following information:

- Have you ever been told that you may have diabetes?
- Has anyone in your family ever had diabetes?
- Do you urinate more than six times a day?
- Are you thirsty much of the time?
- Do you feel numbness or tingling in any part of your body?
- Does your mouth frequently become dry?
- Have you lost or gained more than 10 pounds in the past year?
- Are you often fatigued?

FOR WOMEN ONLY

- Did you ever develop gestational diabetes while you were pregnant?

FOR CONFIRMED DIABETIC PATIENTS ONLY

- When were you diagnosed with diabetes?
- What type of diabetes do you have?
- Do you take medication to control your diabetes?
- If so, what medication(s) do you take?
- If not, how is your diabetes being managed?
- Are you an insulin-dependent diabetic patient?
- What is your baseline sugar level?
- What method is used to measure your sugar level?
- How often is your sugar level measured?
- When was your most recent HbA1c test, and what was the result?
- What is the name, address and telephone number of your diabetes care provider?