

Periodontal disease and **DIABETES**

What is periodontal disease?

Periodontal disease is the scientific name used to describe gum disease. There are two common forms of periodontal disease. The first is called gingivitis, which is mild inflammation of the gums. The other, more serious, form of gum disease is called periodontitis, in which there is more severe inflammation of the gums, and the bone that holds the teeth in place begins to be gradually destroyed.

Recognizing whether you have periodontal disease

The most certain way to find out if you have periodontal disease is to visit a dentist. If the dentist suspects that you may have periodontal disease, x-rays of your teeth may be taken to check the health of the bone that holds the teeth in place.

Healthy gums are pink and firm, are tightly attached to the teeth, and don't usually bleed when you brush your teeth (**Figure 1**). Gingivitis develops when the teeth are not brushed effectively. Plaque builds up on the teeth, next to the gum, and the bacteria in plaque cause the gums to become inflamed. As a result, the gums look inflamed and swollen (**Figure 2**), and may bleed when you brush your teeth. Gingivitis is totally reversible, and with good oral hygiene the gums can return to normal.

Periodontitis, the more serious form of gum disease, results from prolonged (over several years) inflammation of the gums as a result of long-term plaque accumulation.

The gum inflammation becomes more and more severe (**Figure 3**), and the gums start to detach from the tooth. This creates a space between the gum and the tooth called a 'pocket' which is measured by the dentist with a probe. As the pocket gets deeper, the jaw bone holding the teeth in place is gradually destroyed. This process is typically painless, and it progresses very slowly. After many years, so much bone may have been destroyed that the tooth starts to become mobile or loose and gums begin to recede, making the teeth look longer than they used to. This may be the first indication to some patients that there is a problem.

What has periodontal disease got to do with diabetes?

In people with diabetes there is an increased incidence of periodontal disease.

We still don't know the precise reasons why people with diabetes are more likely to suffer from periodontal disease, and this is an ongoing area of research. There are probably several factors which are important, including:

- the immune system may not function properly in people with diabetes, thereby increasing the risk of periodontal disease
- excess lipid tissue (body fat) in obese people with diabetes may produce chemicals which make the gums more likely to become inflamed
- damage to capillaries (the small delicate blood vessels) in the gums may reduce the blood supply to the gums, thereby limiting the actions of defense cells
- wound healing is impaired in diabetes, and therefore, healing in the gums is also reduced.



Figure 1 Healthy gums are pink and firmly attached to the tooth.



Figure 2 Gingivitis: inflamed gums that look red and swollen (particularly the part of gum next to the tooth), and may bleed on brushing.



Figure 3 Periodontitis: the gums are very inflamed, red and swollen. There is bleeding from the gums, and the gums around the lower teeth are receding.



Figure 4 Using a single tufted toothbrush to clean an awkward area with slightly overlapping teeth. The brush is cleaning the point where the gum meets the tooth.

The key thing to remember is that glycemic control (blood sugar level) seems to be very important in determining susceptibility to periodontal disease. Research suggests that individuals with good diabetes control A1C < 7 have a reduced risk of periodontal disease compared to individuals with an A1C > 8.5.

What is the treatment for periodontal disease?

As with most diseases, prevention is better than a cure. Periodontal disease can generally be prevented by maintaining good oral hygiene (i.e. cleaning your teeth effectively).

Brush your teeth twice per day, for approximately 2-3 minutes each time (which is longer than you think when brushing your teeth!). Be sure to brush every surface of the teeth, and particularly the point where the gum meets the tooth (Figure 4). If your teeth are a little overlapping, or there are awkward areas to clean, then use a small (single tufted) brush. The toothbrush should be positioned so the bristles contact the point where the gum meets the tooth at about a 45 degree angle. Use short back and forth strokes of the brush, with gentle pressure.

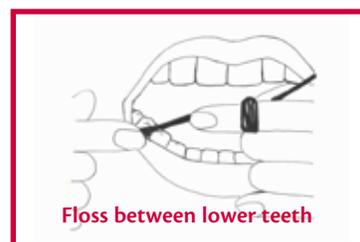
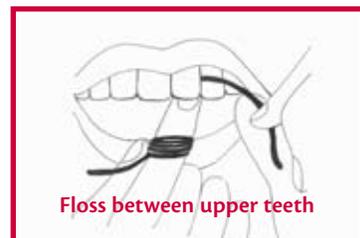
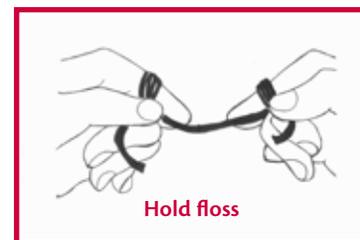
An electric toothbrush brush for most people is as effective as a manual toothbrush. They can also be useful if you have restricted movement. Make sure you clean in between the teeth using floss.

If you have problems with gum disease, it is also recommended to use a mouthwash after brushing. Make sure it contains fluoride.

Summing up

It is very important for all people with diabetes to visit a dentist regularly, so that any gum problems can be detected and treated before they become too severe. Your dentist may also clean your teeth for you on a regular basis, or may ask you to see a dental hygienist for cleaning.

People with diabetes are more prone to gum disease, especially if their diabetes is poorly controlled. Good oral hygiene and regular dental check-ups are particularly important in people with diabetes.



Key points to remember

- As someone with diabetes you may be more prone to gum problems. See your dentist regularly.
- By keeping good control of your diabetes, and having good blood sugar control, you can reduce the likelihood of gum disease.
- Brush and floss your teeth regularly, being careful to brush every part of the tooth. If this makes the gum bleed, it may be a sign of gum inflammation. If you are concerned about bleeding gums, be sure to visit a dentist.
- Even if you no longer have your own teeth, you should still see a dentist periodically to check the health of your mouth.
- If you have had periodontal disease in the past, it is especially important to continue to see the dentist to make sure the disease does not recur.
- Don't smoke. Smoking makes gum disease worse.



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An Organization for People Who Live with Diabetes Every Day.

The mission of **Diabetes Research & Wellness Foundation** (DRWF) is to help find the cure for diabetes, and until that goal is achieved, to provide the care and self-management skills needed to combat the life-threatening complications of this terrible disease.

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