

Periodontal Disease

It's **Not** Just About Your Gums

Many of us understand the importance of living a healthy lifestyle. For example, we have learned that being active, eating healthier, and not smoking can help reduce and prevent the risk of a heart attack, stroke, Type 2 diabetes, and certain types of cancer. What we might not be aware of is the importance of our oral health to our physical and emotional well-being.

It only makes sense that taking care of our overall health means we should also take care of our oral health, such as our teeth and gums. Most of us know that good oral hygiene practices help prevent tooth decay or more severe infections to the mouth. But many people might be surprised to learn that the reasons for good oral health are more than just to prevent cavities. Certain oral health problems may actually be a risk factor for other health conditions. Gum disease, also known as periodontal disease, has been linked to several health conditions such as heart disease and stroke; respiratory disease, and diabetes. Not only is periodontal disease linked to many health conditions, but it's also one of the more common oral diseases.

It's estimated that 21% of Canadian adults have, or have had, moderate to severe periodontal disease (Health Canada, 2010).

What is Periodontal Disease?

Periodontal disease is a bacterial infection that affects the gums and supporting bone of the teeth. These areas include the gingiva (gums), alveolar bone (bone around teeth), and the periodontal ligament (between the teeth and bone). The most common problems from periodontal disease are inflammation of the gingiva (gingivitis) or bone loss around the teeth (periodontitis). The disease starts off slowly and does not cause any initial pain. The signs and symptoms of gum disease often go unnoticed until it becomes a serious problem. This reinforces the importance of having regular oral exams.

The prevention of periodontal disease is important because it reduces the risk of tooth loss, and helps prevent serious health conditions. As you read through this Personal Health Guide you will learn the importance of preventing gum disease, what causes it, and steps you can take to prevent it.

Test Your Knowledge

1. Periodontal disease affects the gums and supporting bone of the teeth. **(T or F)**
2. Periodontal disease leads to more serious health problems if left untreated. **(T or F)**
3. The early stages of gum disease happen very quickly and are usually painful. **(T or F)**
4. Brushing and flossing will help to remove plaque from your teeth and gums. **(T or F)**
5. A Periodontist specializes in treating serious forms of gum disease that don't get better with normal dental care. **(T or F)**
6. Once the infection moves past the gum line and into the underlying bone, the gum disease is called gingivitis. **(T or F)**

Why Do We Need to Prevent or Manage Periodontal Disease?

It is important to pay attention to periodontal disease because the early stages are usually painless and often go undetected. Between 2007 and 2009, 32% of adult Canadians (20 to 79 years of age) were found to have gingivitis (Health Canada, 2010). In addition, almost half of adults who didn't see a dental professional in the last year also had gingivitis (Health Canada, 2010). Ignoring the signs and symptoms could lead to inflammation and irritation of the gums and then potential loss of attachment to the tooth. If the loss of attachment isn't stopped, it will lead to tooth loss. When the disease gets to a stage where the gum line starts to move away from the tooth, it's irreversible. The gum line doesn't grow back and an individual might have to look at potentially expensive oral surgery to fix the gum line in order to reduce the chances of losing a tooth. The loss of teeth can be very upsetting, as it affects an individual's appearance and could also make it challenging to eat a balanced diet.

Periodontal disease could also put an individual at greater risk for other health conditions if bacteria from diseased gums and teeth enter the blood stream. Once in the bloodstream, bacteria might travel to other areas of the body and could make an existing health condition worse (Humphrey, Fu, Buckley, Freeman, & Helfand, 2008). For example, similar to smoking or high cholesterol, periodontal disease could increase the risk for heart disease and stroke. Although it's still unclear what the main cause is, it's thought that bacteria from periodontal disease travels through the bloodstream and contributes to the formation of plaque, which is known to clog arteries, slowing blood flow. (Humphrey et. al, 2008). These same bacteria could also travel to the lower respiratory tract and cause infections or worsen a condition such as pneumonia, bronchitis, emphysema, or chronic obstructive pulmonary disease (COPD).

Individuals who have diabetes have a higher chance of getting periodontal disease versus someone who doesn't have diabetes. This could occur because those who have diabetes usually have poor blood circulation in the gums and higher glucose levels in the fluids of the mouth which bacteria use for food. Periodontal disease can also interfere or affect an individual's ability to control their diabetes, potentially making it worse (Commisso, Monami, & Mannucci, 2009).

It's clear that periodontal disease cannot simply be thought of as just affecting an individual's appearance or ability to chew and digest food. The disease can also lead to more serious health problems if left untreated.

What Leads to Periodontal Disease?

The main cause of periodontal disease is poor oral hygiene. If we don't brush and floss every day, plaque begins to form on the teeth and the gum line. Plaque is a clear and sticky substance that provides a great source of food for harmful bacteria. If plaque is not regularly removed, it will harden and turn into tartar (calculus). When it turns into tartar it cannot be removed by brushing and flossing – an individual will need to go to a dentist to have it scraped off.

If an individual leaves the tartar on the teeth, it's more likely that the bacteria will cause an infection and inflammation of the gums (gingivitis). The gums will be red and will bleed when brushed. Many people might not notice much at this stage. But as the gingivitis worsens, little areas or pockets of infection will form where the teeth meet the gums. When it progresses further, the infection will break down the gum tissue that attaches to the teeth, causing "attachment loss". At this stage individuals will actually see puffiness and swelling, more bleeding, and colour changes (redness of the gums). Once the infection moves past the gum line into the underlying bone, the gum disease is called periodontitis. At this later stage it's much more painful and the bones around the teeth begin to break down. The teeth are now at greater risk of falling out. This process takes a long time, but the longer the disease goes untreated, the harder it will be to repair the damage and the greater the risk that the bacteria might negatively affect other body systems.

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How Do We Prevent Periodontal Disease?

Keeping your teeth and gums clean is key in the prevention of gum disease. As mentioned earlier, plaque forms on our teeth and gums every day. Therefore, you need to brush your teeth at least twice a day and floss at least once every 24 hours to reduce the chances of plaque turning into tartar. For more information on the proper technique for brushing and other oral hygiene practices, read the *Oral Hygiene – Keepin’ it Clean* article in the Health Issues Newsletter.

In addition to daily brushing and flossing, it’s important to visit a dental professional on a regular basis for a cleaning and dental exam. A dental exam will help detect any early signs of gum disease. If there’s a problem, the dentist can work with you to treat it early, before it becomes a serious problem.

What can I do?

Keeping your teeth clean and regular dental checkups should help to prevent any gum disease from occurring. You should also learn what to look for when it comes to the early signs and symptoms of periodontal disease.

If you see or feel any of the following changes, see your dentist right away for a checkup:

- Change in the colour of your gums (redness)
- Gums that are red around your teeth
- Gums that bleed every time you brush or floss
- Bad breath that doesn’t go away
- A taste of metal in your mouth
- Shiny, puffy, or sore gums
- Teeth that are sensitive for no apparent reason

Lead a Healthy Lifestyle

Limit how much and how often you have high sugar snacks and drinks. They are primary causes for cavities and gum disease. Instead, eat a healthy, balanced diet based on *Canada’s Food Guide*.

Tobacco is also a major contributor to dental problems such as bad breath, stained teeth, shrinking gums, mouth sores, decreased sense of taste and smell, and may cause oral cancer. If you use tobacco, get help to quit. For help, visit www.smokershelpline.ca

Treatment of Periodontal Disease

The good news is that periodontal disease, like many chronic diseases, is usually manageable and can be treated if caught in its early stages. In the early stages a dental professional will remove any tartar build up. This is to be followed up with regular brushing and flossing to prevent the problem from occurring again. By getting rid of the plaque and tartar build-up on your teeth, your gums have a better chance of healing.

However, when periodontal disease is more serious your dentist may refer you to a specialist called a Periodontist. A Periodontist treats serious forms of periodontal disease that don’t get better with normal dental care. Treatment can involve restoring or regenerating bone and gum tissue that have been lost because of the disease. At these more serious stages, proper oral care becomes even more important.



The Proper Way to Floss

Flossing helps to remove plaque and bacteria that you can't reach with your toothbrush such as under the gumline and between your teeth. You could be missing more than one-third of your tooth surface if you aren't flossing. Remember to floss a least once a day to help prevent plaque from hardening into tartar. For proper flossing techniques follow the examples on the right.



Fig. 1 Wind 45 centimetres (18 inches) of floss around your middle fingers.



Fig. 2 Hold the floss between your thumb and first finger. Guide the floss back and forth between your teeth.



Fig. 3 Make the floss into a c-shape around the tooth where the tooth meets the gum. Put your fingers inside your mouth and slide the floss up and down to remove plaque and food.



Fig. 4 Unwind the floss from one finger and wind it onto the other finger so you have a clean section of floss for each tooth.



Fig. 5 Using a floss holder can make flossing easier for children.

Make It Happen At Your Workplace:

- Include dental professionals at a workplace health fair. They can educate employees on proper dental care and early identification of periodontal disease.
- Provide employees with encouragement and support to quit using tobacco.
- Invite a dental professional as a guest speaker at a Lunch and Learn session.



Resources and Websites

Canadian Dental Association
www.cda-adc.ca

Canadian Academy of Periodontology
www.cap-acp.ca

Canadian Dental Hygienists Association
www.cdha.ca (click on oral care centre)

Key References

- Health Canada. (2010). *Reports on the findings of the oral health component of the Canadian health measures survey: 2007 – 2009*. (Catalogue No. H34-221/2010E-PDF). Ottawa, ON: Queen's Printer Ottawa.
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- Humphrey, L. L., Fu, R., Buckley, D. I., Freeman, M., & Helfand, M. (2008). Periodontal disease and coronary heart disease incidence: A systematic review and meta-analysis. *Journal of General Internal Medicine*, 23(12), 2079-2086.
- Commisso, L., Monami, M., & Mannucci, E. (2009). Periodontal disease and oral hygiene habits in type 2 diabetic population. *International Journal of Dental Hygiene*, 9(2011), 68-73.

