

## Diabetes and Dental Health – Are You At Risk?

Diabetic patients are 2 times more likely to develop tooth decay, periodontal disease and heal much slower than non-diabetic patients. People with diabetes have special needs and your dentist and hygienist are equipped to meet those needs - with your help. Keep your dentist and hygienist informed of any changes in your condition and any medication you might be taking. Postpone any non-emergency dental procedures if your blood sugar is not in good control.

### *What's the main cause of tooth decay in diabetes?*

Tooth decay in diabetes is the result of **plaque** bacteria metabolizing dietary sugars. Plaque is a sticky biofilm that forms on the surfaces of teeth. While brushing your teeth regularly for two minutes each time is the way to remove plaque, it comes back within 20 minutes of eating at mealtime or snacks. If plaque is not removed by regular tooth brushing, then it builds up, hardens and forms into tartar. Tartar must be removed by your dentist or dental hygienist using a tool to scrape the tartar off the tooth and gums. Plaque and tartar can lead to **gingivitis** (early gum disease), **periodontal** (severe gum disease that results in bone destruction and tooth loss), and tooth decay (holes in the tooth).

### *Periodontal Disease – The Silent Epidemic*

You are probably aware of the pain and damage to your teeth that can result from cavities, but if you are an adult the chances are greater that you will lose teeth to gum disease than to dental decay. Nearly 80% of adult Americans have some form of periodontal disease, an infection of the tissues that support the teeth. The good news is that in most people gum disease is preventable and often reversible. Attention to good oral hygiene (brushing and flossing), and regular professional cleanings may be all that is required to keep your gums and teeth healthy for your entire life.

Risk factors associated with the development of gum disease include smoking, stress, inadequate nutrition, diabetes, and certain medications, and it is estimated that up to 30% of the population may have some genetic predisposition to the disease.

Periodontitis begins silently and often painlessly with the bacteria in plaque, the sticky, colorless film that constantly forms on the teeth. In as little as 24 hours this plaque can harden into a substance called tartar (calculus) which can only be removed by a dental professional. Left unremoved, the bacteria present in plaque irritate and attack the gums and surrounding tissues of the teeth. The earliest form of gum disease is called gingivitis. Often the only indication of the disease at this point is gums which may be red or swollen, and may bleed when brushed. At this stage the disease, with proper oral hygiene and regular dental visits, is almost certainly reversible.

Left untreated, gingivitis can progress to periodontitis, and can result in tooth and bone loss and chronic inflammation that may result in serious systemic disease. Plaque can spread and grow below the gum line. Toxins produced by bacteria may cause a chronic inflammatory response in which the body essentially attacks itself, and the process is begun in which the tissues and bone that support the teeth are broken down and separate from the teeth, forming pockets which trap more bacteria, resulting in more tissue damage, inflammation, and further destruction of gum and bone, and the loosening and loss of teeth. These infections have been implicated in the development of serious medical conditions. Periodontal disease has been linked to cardiovascular disease, bacterial respiratory infections, stroke, diabetes, and oral and pancreatic cancers.

The most important weapons in the arsenal against gum disease are good oral hygiene, especially brushing and flossing, and regular dental check-ups and cleanings. Your dentist is trained to detect gum disease, even in its earliest stages, and has a wide variety of options available to halt its progression and even reverse the damage. Treatments may vary from regular professional cleanings, to scaling and planing, in which the tartar is removed above and below the gum line, to a variety of other protocols dependent upon the dentist's assessment of your condition, including several new medications that are now available.

With this knowledge, and your dentist's care, there is no reason you can't keep a healthy smile for life.

### ***What are common signs and symptoms of periodontal disease?***

Periodontal disease is often silent, meaning symptoms- particularly pain- may not appear until an advanced stage of the disease. However, you should still be on the lookout for the signs and symptoms, which include:

- Red, swollen or tender gums or other pain in your mouth
- Bleeding while brushing, flossing, or when eating certain foods
- Gums that are receding or pulling away from the teeth, causing the teeth to look longer than before
- Loose or separating teeth
- Pus between your gums and teeth
- Sores in your mouth
- Persistent bad breath
- A change in the way your teeth fit together when you bite
- A change in the fit of partial dentures

If you notice any of these symptoms, be sure to contact your dentist or periodontist right away!

### ***Can sealants help prevent tooth decay with diabetes?***

For adults and children, dental sealants act as a barrier to prevent cavities. As oral health problems are more common in people with diabetes, this can be especially beneficial. They are a plastic material usually applied to the chewing surfaces of the back teeth (premolars and molars) where decay occurs most often.

Thorough brushing and flossing help remove food particles and plaque from smooth surfaces of teeth. But toothbrush bristles cannot reach all the way into the depressions and grooves to extract food and plaque. Sealants protect these vulnerable areas by "sealing out" plaque and food.

The only real secret is to keep your teeth clean and watch sugar and carbohydrate intake. Make sure you are seeing your dentist on regular recall visits for professional cleanings and exams. Use fluoride toothpaste and ask your dentist if he feels that you should have additional fluoride supplements based on medications you may be taking that cause dry mouth.

Diabetes is a disease which directly impacts the soft tissues; gums and salivary glands, and can indirectly affect the teeth. Daily flossing and brushing along with regular visits to the dentists are the foundational principles for diabetics. If salivary flow has diminished, the mouth becomes dry, and more susceptible to decay. Two strategies are helpful; firstly sugar-free candies or xylitol gum can help stimulate more saliva. Secondly, use prescription fluoride toothpaste in the morning and before bed to help strengthen and re-mineralize the teeth.