

Oral Health Report

A newsletter for the patients of Pankey Institute trained dentists

Summer 2006



Does My Oral Health Affect My Overall Health?

Contributed by Dr. Barry F. McArdle of Portsmouth, NH

*Y*es! When you have gum disease (technically known as periodontal disease or periodontitis), your overall health could suffer as well.

- ◆ Expectant mothers who experience significant gum disease are at much greater risk of having a premature or low birth weight baby.
- ◆ Diabetics who are afflicted with chronic periodontitis have far more difficulty controlling their diabetes than those who do not have gum problems.
- ◆ A strong association has been found between having periodontal disease over many years and a higher incidence of cardiovascular disease in the form of heart attacks and strokes.

The cause and effect relationship between ailments in your mouth and the other disease processes just mentioned is not precisely understood, but there is a common thread appearing in all the research.

Gum disease is the body's inflammatory response to the bacteria in your mouth. Diabetic complications, cardiovascular disease, and preterm and low birth weight babies are all the result of other inflammatory mechanisms in your body. It is thought that if you have severe enough periodontal disease for long enough, it will trigger these other inflammations.

Periodontitis can strike anyone of any age at any time. Visits to your dentist are a must at least twice a year so periodontal disease can be detected and treated before it progresses to a phase where it can affect your general health. ■



Turn the page to learn about some of the ways your oral health and systemic health are interrelated.



The information in this newsletter is general in nature and may not pertain to your specific oral health. For your specific health information, consult your dentist.

A not-for-profit educational foundation dedicated to improving the oral health care of the world's citizens

Gum Disease Linked to Heart Attacks and Strokes

The Journal of Dental Research published the results of a study in January of this year that shows treatment of gum disease may reduce the risk of cardiovascular disease. This latest research supports the results of prior research published in 2004 and widely disseminated by the American Heart Association in that year.

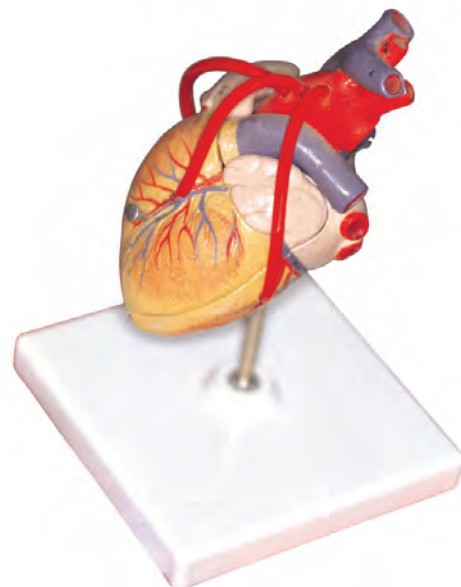
Researchers found strong evidence linking periodontal (gum) disease to an increased risk of developing blood clots, which could lead to the onset of heart attack and stroke.

Participants in the research

had blood tests before and after treatment of gum disease that was so severe that all their teeth had to be extracted. The blood tests were for blood-clot risk factors and signs of inflammation. The average level of factors fell when the gum infection was eradicated.

Conclusions:

- ◆ When gum disease is eliminated, the risk of heart attacks and clots is greatly reduced.
- ◆ Inflammation in the mouth has a measurable effect in the bloodstream, and therefore the rest of the body. ■



Some websites for more information:

www.perio.org
www.ada.org
www.medicalnewstoday.com
www.mayoclinic.com
www.diabetesmonitor.com

Young Diabetics at Risk for Periodontal Disease

New research shows that the destruction of gums can start in diabetic children as young as six years old. Early signs of periodontal disease were found in nearly 60 percent of diabetic children in the 6-to 11-year-old group, twice the percentage

found in the nondiabetic children in that age range. This is far younger than was previously believed to be affected. In the 12- to 18-year-old study group, nearly 80 percent of patients with diabetes had early periodontal changes.

"Our research illustrates that

programs to prevent and treat periodontal disease should be considered a standard of care for young patients with diabetes," said Dr. Ira B. Lamster, Dean of the College of Dental Medicine at Columbia University and principal investigator on the study. ■

Gum Disease Linked to Low Birth Weight

Are you pregnant?



According to the American Academy of Periodontology, about 50% of all expectant mothers experience uncomfortable swelling, bleeding, or tenderness in the gum tissue. "Pregnancy gingivitis" usually starts in the second month of pregnancy and decreases during the ninth month. This is because hormonal changes affect the saliva and bacteria in the mouth resulting in plaque buildup that leads to inflammation.

Plaque is a sticky film of bacteria that adheres to the surfaces of teeth and can extend below the gum line. The gums then hold bacteria that attack the soft tissue, ligaments and bone surrounding teeth. These bacteria can travel

throughout your body via your blood stream.

Recent research of women in their third trimester of pregnancy indicates that an increased level of certain bacteria in the saliva is correlated with low birth-weight, even in the absence of advanced periodontal disease. Pregnant women, who receive treatment for their periodontal disease, reduce the risk of giving birth to low birth weight or preterm babies.

If you are pregnant, it's a good idea to see your dentist and increase the frequency of your visits for professional teeth cleaning. Call your dentist if you are experiencing gum redness, swelling or tenderness. ■

Risk of Premature Delivery Seven Times Higher

In a 1996 study of over 100 women who were either pregnant or had recently given birth, the women with periodontal disease were seven times more likely to deliver a premature, low birth weight baby than those with healthy gums. By comparison,

combined alcohol use and smoking during pregnancy increased the probability by only 2.5 times. An ongoing study of 2,000 women has similar findings.

Researchers believe bacteria from the gums enter the bloodstream during eating or brushing. These bacteria then affect the levels

of prostaglandin in the woman's body. When the level of prostaglandin rises significantly, usually in the ninth month of pregnancy, labor begins. In women with gum disease, the level of prostaglandin may rise too soon, triggering early labor. ■

ASK THE DENTIST

Why should I have braces when I could have “instant orthodontics” using veneers?

Contributed by Dr. Nancy A. Ward of Baltimore, MD



Dr. Ward has a practice concentration in adult orthodontics using clear braces and Invisalign® to establish a

beautiful healthy bite. Many times creating a functional bite through orthodontics gives you a beautiful esthetic smile with minimal dentistry.

There are many ways to create a beautiful smile with modern dentistry. Moving your teeth into proper alignment through orthodontics not only gives you a beautiful smile but also aligns your teeth so your teeth and jaw joints can work more effectively and there is minimal wear and tear on your teeth, jaw bones and joints.

One of the most frequent questions I hear is “Why should I have braces when I could have veneers put on my teeth to make them look straight?” Having veneers adhered to your front teeth may solve an esthetic problem, but

it may not solve your occlusal (bite) problems. Occlusal problems are likely to increase the risk of the veneers being damaged as you bite and chew.

Many adults don’t want to be seen wearing braces and are impatient to get their dentistry done as quickly as possible. Unfortunately, this is not in many patients’ best interest. If your dentist recommends orthodontics, discuss the benefits of orthodontic care and consult with a recommended orthodontic provider so you can make an informed decision.

The advantages of having orthodontics before your teeth are restored follow:

- ◆ Proper alignment enhances tooth and jaw function, thus maximizing long-term oral health and comfort.
- ◆ Proper alignment increases the longevity of the dentistry. Both your natural teeth and your restorations will last longer.
- ◆ Having straight teeth makes it easier for you and your dental team to keep them clean.

- ◆ If you need a filling, crown or bridge, your dentist can usually do better restoration if the teeth are aligned properly.

Another advantage for some people:

- ◆ If you have a skeletal problem in which the upper and lower jaws do not match from front to back or side to side, a combination of orthodontics and incredibly reliable surgical procedures can be done to correct the problem. The results are predictably beautiful, and the improved occlusion will help you maintain your natural teeth for your lifetime. Correction of an overbite or underbite in this fashion can dramatically improve facial appearance.

If you choose orthodontics, here are some things you can anticipate:

- ◆ It will *not* take longer to move your teeth because you are an adult.



Plastic aligning trays, like the Invisalign® trays worn by this woman, are barely perceptible.

- ◆ You will likely be seen every two to six weeks for adjustments, depending on the type of orthodontic care you receive.
 - ◆ After braces are initially put on and each time they are adjusted, your teeth are apt to be tender for a couple of days. Taking an over-the-counter analgesic such as aspirin should alleviate the discomfort.
 - ◆ After the braces are removed, a retainer is worn full time for three to six months, then at night for a year. It is advisable to keep your retainer and periodically check the fit since everything in the body has a tendency to move with time.
 - ◆ You will have slight movement in your teeth after the braces are removed, and your orthodontist or dentist will make small shaping adjustments to the top of the teeth so they come together in an optimal bite. This refinement is called "equilibration."
- You do not have to look like a "metal mouth" during the process.**
- ◆ Clear ceramic braces with a transparent wire are available which allow for quality treatment and no additional treatment time.
 - ◆ Clear plastic "aligning" trays that fit over the teeth are also a possibility for many patients. These are computer manufactured from casts of your mouth to move your teeth in stages. Aligning trays are not effective for some types of tooth movement. Some patients are able to switch to aligning trays after a period of wearing ceramic braces and wires. ■
 - ◆ If you grind your teeth or experience jaw joint pain, your dentist will likely recommend a period of bite splint therapy prior to orthodontics.
 - ◆ You will have slight movement in your teeth after the braces are removed, and your orthodontist or dentist will make small shaping adjustments to the top of the teeth so they

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Learn about the special training your dentist has received at The Pankey Institute. Find articles about optimal oral health and beauty. Read about the latest hot topics in dentistry.





Dentist-Preferred Method of Tooth Whitening

Contributed by Dr. Dag Zapatero, Virginia Beach, VA

Have you ever wondered how tooth whitener works? I often tell my patients to think of teeth as a set of filters that protect the nerves or pulps of the teeth. Our diet and habits cause our teeth to stain and darken from the prolonged exposure to these substances. We do not think of tooth enamel and dentin as being porous, when in fact they are. Coffee, tea, wine and smoking are all thought to stain our teeth, by getting caught on the surface and in the pores of our teeth, clogging the filters and causing the teeth to change color and darken over time.

Dental tooth whiteners utilize the oxidizing agents hydrogen peroxide or carbamide peroxide. Either of these active ingredients will penetrate through the pores of the teeth and bleach the internal deposits. Three factors are thought to impact the effectiveness of tooth whitening: 1) the type and concentration of the product, 2) the amount of time the product is in contact with tooth structure, and 3) how quickly the product degrades once in contact with the tooth.

Over-the-counter products are safe and can be effective if used



Before and after bleaching

long enough. Most users of these products don't have their dentist diagnose the cause of discoloration, and the efficacy of the product is not evaluated by the dentist prior to use. The concentration of whiteners in these products is low in order to make them safer. They work well but require more use to produce the desired effect.

On the other side of the spectrum is the marketing-driven laser or light-activated whiteners. Researchers have questioned the value of using lights or lasers

because some of the effects produced by these methods are due to tooth dryness. The real active ingredient in these products, a high concentration of hydrogen peroxide, may require special precaution during each application, and the potential for adverse effects is higher with this method.

So what is the "preferred" method of tooth whitening? The Pankey Institute is an advocate of the dentist diagnosing and screening patients for bleaching prior to the initiation of treatment. Once a



Dentist-fabricated custom bleaching trays made to fit the patient's teeth assure the bleaching gel comes in proper contact with the tooth surface.

patient is found to be a good candidate for whitening, impressions are taken of the teeth and custom trays are fabricated of thin, flexible material to fit over the teeth. The dentist then supplies a recommended bleaching gel and instructions for the patient to put gel on the inside of the trays and wear them for a specified number of minutes for a specified number of times, for example, for one hour a day for a week.

It is up to the dentist and the patient to talk about the expected

outcomes and desired effects as part of the screening interview. The dentist will take into consideration the patient's age, history of tooth sensitivity, dental history, and the amount of time a patient is willing to devote to the at-home treatments, when selecting a material to prescribe.

Since the dentist-supplied products are office-dispensed, they generally contain a higher concentration of hydrogen peroxide and will work quicker than over-the-counter materials. Due to this

higher concentration, they may produce more tooth sensitivity or gum irritation. Both side effects have been shown to be reversible if the product is discontinued for a short time.

Your dentist may also recommend a desensitizing rinse or a fluoride gel to minimize any discomfort. This method produces very predictable results while minimizing potential side effects. It should be considered as the "preferred" method of tooth whitening. ■

Oral Care for Your Baby

If you have a new baby in the house, you are extra busy and not as likely to take care of your own oral health needs as frequently as in the past. The tendency of new parents is to put off going to the dentist and/or oral hygienists until "a more convenient time." Take good care of yourself and make a dental appointment as soon as possible.

In addition to caring for yourself, you will be caring for your baby. Researchers have found that care givers can pass on germs that cause tooth decay to babies. Therefore, it is very important to clean your baby's teeth and to have them examined by the dentist between 12 and 18 months of age. It is just as important for you to keep your teeth and gums very clean and healthy, so that you do not pass germs to the baby.

If your baby's teeth are not kept clean, decay may start in early childhood. We advise establishing a routine for cleaning your baby's mouth as soon as you see teeth erupting (coming through the gum). Wipe your baby's mouth and gums using a clean, wet, cloth or piece of gauze after each feeding. You can use a small soft toothbrush on newly erupted teeth but do not use toothpaste.

In addition to oral hygiene, be concerned about the sugars in your baby's diet. Keep sugary drinks out of baby bottles. If you use a bottle at nap time or bedtime, fill it with plain water. Reduce the frequency of night time feedings because even milk and formula contain some amount of sugar. Never dip pacifiers in anything sweet. If your baby is on liquid medication, rinse the mouth with clear water after the



medication is given.

You can check for early warning signs of decay by lifting up your baby's lips. White, chalky teeth signal a mild case; brown or black stained teeth indicate a more serious case. If you see signs, contact your dentist or recommended pedodontist immediately. ■



DSI: Dental Scene Investigation

Contributed by Dr. Brian R. Beirl, Seminole, FL

Like the detective work of the investigators on the CSI television series, attention to detail is the hallmark of a comprehensive dental evaluation. Much is learned during a **conversation** between you and your dentist prior to the examination of your mouth. Your dentist wants to know about your past dental experiences, expectations, and concerns in order to help you best. Then comes a thorough oral examination.

This **meticulous examination** involves much more than your teeth. A thorough examination involves the head and neck muscles, jaw joints along with gum tissues and supporting bone. All of these areas hold clues that aid your dentist in diagnosing current conditions and predicting future problems.

For example, some clues are specific head and neck muscles that are sore or asymmetrical in size, clicking and popping sounds occurring in your jaw joints, and

recession or irregularities in your gum line. The teeth are like fingerprints. Your dentist detects a lot of information from wear patterns and signs of mobility. Your dentist uses x-rays and other imaging, photography, jaw measurements and molds of your teeth to **re-enact** what has happened, is hap-



pening and will likely happen to your dental health if left untreated.

The molds of your teeth are used to create models. On these models, your dentist **tries out** possible dental treatments to see what will work best.

Like the CSI team, your dentist and the dental staff combine their talents in collecting information. Sometimes the team is extended to include **specialists**, such as an orthodontist, endodontist, periodontist and oral surgeon. They, too, can aid your dentist in making a proper diagnosis and developing an appropriate treatment plan.

Your dentist communicates with these specialists and analyzes all the information to determine your treatment options and formulate a recommended course of treatment that will appropriately meet your needs.

Like the CSI team, your dentist will not rush to judgment because a premature treatment decision can result in poor long-term results and possible over-treatment. The dentist must be **methodical** and consider **all** the possible dental factors in light of your personal circumstances and objectives so your dentistry is appropriate for you. ■

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