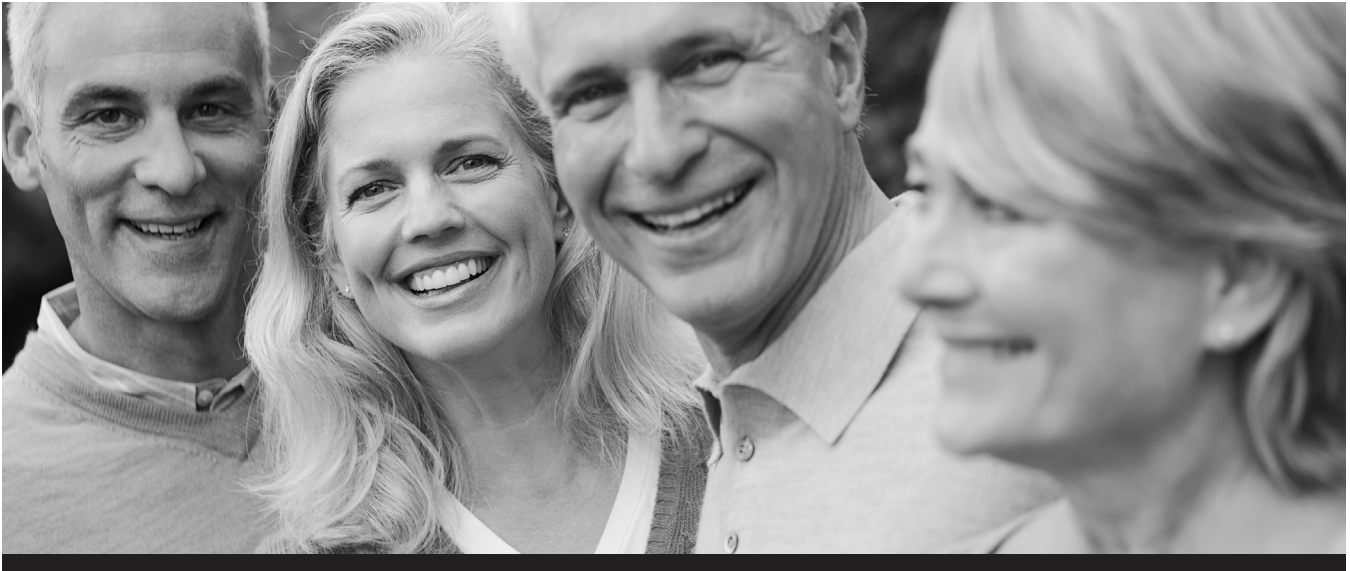


Evidence-Based Benefits from Delta Dental of Illinois



Periodontal (gum) disease is an infection of the tissues that support teeth. Periodontal diseases attack just below the gum line, where they cause the attachment of the tooth and its supporting tissues to break down. As the tissues are damaged, pockets are formed in the gums. Generally, the more severe the disease, the greater the depth of the pocket.

Periodontal diseases are classified according to the severity of the disease. The two major stages are gingivitis and periodontitis. Gingivitis is a milder and reversible form of periodontal disease that only affects the gums. Gingivitis may lead to more serious, destructive forms of periodontal disease.

Left untreated, periodontal disease can result in the loss of otherwise healthy teeth. Problems caused by periodontal disease, however, aren't limited only to the mouth. Studies show that periodontal disease is linked to complications resulting from diabetes, high-risk cardiac conditions and suppressed immune systems, and that it also can be a factor in the incidence of pre-term, low birth weight babies. Together, these problems create additional costs of billions of dollars each year in the United States, mostly for medical treatment.

That is why Delta Dental of Illinois introduced its Enhanced Benefits Program, which incorporates several evidence-based dentistry solutions. This enhancement to group dental plans provides special benefits to:

- People with periodontal (gum) disease.
- People with diabetes.
- Pregnant women.
- People with high-risk cardiac conditions.
- People with kidney failure or who are undergoing dialysis.
- People undergoing cancer-related chemotherapy and/or radiation.
- People with suppressed immune systems due to HIV positive status, organ transplant, and/or stem cell (bone marrow) transplant.
- People at risk for oral cancer.

Delta Dental of Illinois recommends that people who have one or more of these conditions follow the recommendations for care outlined on the next pages for their own health and benefit.

Oral Health & Overall Health

Periodontal (gum) disease is a chronic bacterial infection that affects the gums and bone supporting the teeth. If left untreated, periodontal (gum) disease can cause severe damage to the gum tissue and surrounding bone and can ultimately lead to loss of teeth. Periodontal disease affects three out of four people, making it the most significant dental disease affecting adults. The disease is a significant health issue on its own, but also appears to exacerbate pre-term pregnancies, diabetes, certain heart conditions and systemic infections in people with suppressed immune systems.

Diabetes & Periodontal Disease

As the sixth deadliest disease in the United States, diabetes is one of our nation's heaviest health burdens. The American Diabetes Association estimates that nearly 21 million children and adults in America are living with diabetes, either diagnosed (15 million) or undiagnosed (six million).

The relationship between diabetes and oral health, specifically periodontal disease, is well-accepted in the medical and dental communities. Observational studies have consistently reported evidence of a greater prevalence, incidence, severity, extent or progression of periodontal disease in diabetics. Population-based epidemiological studies, reinforced by clinical studies, have confirmed the association between diabetes and periodontal disease on the microbiological level.

- **Benefits for People with Diabetes:** *Enrollees with diabetes are eligible for four teeth cleanings, either prophylaxis (general cleaning) or periodontal maintenance, in a benefit year.**

Pregnancy & the Importance of Dental Cleanings

Few things hold greater value than the birth of a healthy baby. However, scientific evidence indicates that women with periodontal disease are up to 7.5 times more likely to give birth to a pre-term, low birth weight infant.

Pre-term infants are at an increased risk for a number of serious health complications, including chronic lung disease, severe brain injury, motor and sensory impairment, learning difficulties and behavioral problems. First-year mortality rates are significantly higher for pre-term infants, and those that do survive accrue an

average of \$51,600 more in costs than full-term infants during the first year of life.¹ In addition, these children often require significantly greater family practitioner services, education services and social services than infants born at term or normal birth weight.²

Although further studies are continuing to explore the link between periodontal disease and pre-term, low birth weight babies, the potential health ramifications, quality of life and economic impact of the condition warrant taking precautions to reduce its incidence.

- **Benefits for Pregnant Women:** *Pregnant enrollees are eligible for one additional prophylaxis (general cleaning) or periodontal maintenance visit during the time of the pregnancy.**

Reducing Cardiac Risk with Good Oral Health

People with high-risk cardiac conditions also have a higher risk of endocarditis – an infection of the inner lining of the heart. A recent guideline by the American Heart Association (AHA) indicates that an individual's overall oral health may be an important factor in avoiding infective endocarditis. Infective endocarditis occurs when bacteria, often spread from the mouth, enters the bloodstream and attacks previously damaged areas of the heart.

Treatment for endocarditis comes at a hefty cost for both patients and employers, as the average patient is hospitalized for six weeks and misses 198 workdays. In addition, endocarditis is capable of destroying heart valves and has a 20 percent mortality rate. In 2005, cardiovascular disease was responsible for over 864,000 – or one out of every 2.8 – deaths in the United States.³ Improving the oral health of patients with cardiac conditions can save lives by reducing the bacteria present in the mouth, which in turn reduces the risk of infectious bacteria making their way to the heart.

- **Benefits for People with High-Risk Cardiac Conditions:** *Enrollees with high-risk cardiac conditions are eligible for four teeth cleanings, either prophylaxis (general cleaning) or periodontal maintenance, in a benefit year.* Conditions include: a history of infective endocarditis; certain congenital heart defects such as having one ventricle instead of the normal two; individuals with artificial heart valves; heart valve defects caused by acquired conditions*

like rheumatic heart disease; hypertrophic cardiomyopathy, which causes abnormal thickening of the heart muscle; individuals with pulmonary shunts or conduits; mitral valve prolapse with regurgitation (blood leakage).

Oral Health & the Prevention of Systemic Infections for Those with Suppressed Immune Systems

Approximately eight million Americans suffer from kidney disease.⁴ Research has shown that individuals with periodontal disease were nearly twice as likely to have chronic kidney disease. Dental infections increase the risk of systemic infection in people with kidney failure, and systemic infection increases the risk of serious side effects. As with endocarditis, bacteria from the mouth can infiltrate the bloodstream and cause infections that further compromise a patient's health. Preventive measures, such as additional cleanings, can speed correction of the dental infection and help reduce further health complications.

Certain health conditions or their treatments – such as chemotherapy, radiation therapy, HIV positive status and organ or stem cell (bone marrow) transplants – can suppress the immune system. Individuals with suppressed immune systems are less capable of fighting off infection. Bacteria built up in the mouth can enter the bloodstream, create infection and further complicate their health. People with suppressed immune systems may benefit from having their teeth professionally cleaned at more frequent intervals to reduce the build-up of bacteria in the mouth.

Head and neck radiation causes some specific additional oral health problems. According to the National Institute of Dental and Craniofacial Research (NIDCR), prevention of problems in the mouth is critical to obtaining the maximum benefit from cancer treatment, and people are encouraged to see a dentist before beginning cancer treatment. Because a common side effect of head and neck radiation is an increase in cavities, the NIDCR recommends fluoride treatment and the use of prescription-strength fluoride toothpaste by those undergoing this treatment. Enrollees who are receiving this type of radiation should ask their dentist if they would benefit from prescription strength fluoride toothpaste. This product is often covered by medical/prescription drug benefit plans.

- **Benefits for People with Kidney Failure or who are Undergoing Dialysis:** *Enrollees with kidney failure or who are undergoing dialysis are eligible for four teeth cleanings, either prophylaxis (general cleaning) or periodontal maintenance, in a benefit year.**
- **Benefits for People Undergoing Cancer-Related Chemotherapy and/or Radiation and for People with Suppressed Immune Systems:** *Enrollees who are undergoing cancer-related chemotherapy and/or radiation or have suppressed immune systems due to HIV positive status, organ transplant, and/or stem cell (bone marrow) transplant are eligible for four teeth cleanings, either prophylaxis (general cleaning) or periodontal maintenance, in a benefit year.* Additionally, the enrollee is eligible for fluoride applications; frequency is determined by group contract. Affected individuals should consult a dentist before beginning treatment. Prescription-strength fluoride toothpaste and mouth rinses may also be recommended, and are often covered by medical/prescription drug benefit plans.*

Breakthrough in Oral Cancer Detection

When it comes to oral cancer, prevention and early detection are key. This year, an estimated 8,000 Americans will die from oral cancer, and 30,000 new cases will be diagnosed. Although the five-year survival rate has not improved in the last 40 years, if the cancer is diagnosed at an early stage, survival rates can increase significantly – from 57 percent to 81 percent. The OralCDx brush biopsy is a tool for detecting cancerous and pre-cancerous cells and represents a powerful breakthrough in the fight against oral cancer. The American Dental Association has extensively studied brush biopsy and approves the method for the detection of oral cancer.

- **Benefits to Aid the Fight Against Oral Cancer:** *All Delta Dental of Illinois plans cover the OralCDx brush biopsy, if oral surgery coverage is included in your dental benefit plan.*

Periodontal Disease

For patients with a history of susceptibility to periodontal diseases, periodontal maintenance needs to be conducted at more frequent intervals.^{5,6} Statistical modeling⁷ and Delta Dental's analysis of its own claims data⁸ show that

these non-surgical benefits are more economical than periodontal surgery. These procedures can help maintain overall health and reduce tooth loss compared to those periodontal patients who do not receive these therapies.⁹ Tooth loss is a major expense in the dental system because tooth replacement costs are great whether the tooth is replaced by a conventional bridge or a dental implant.

• **Benefits for People with Periodontal Disease:**

Enrollees with periodontal disease are eligible for four periodontal maintenance visits in a benefit year or two prophylaxis (general cleaning) and two periodontal maintenance visits in a year. Additionally, the enrollee is eligible for fluoride applications; frequency is determined by group contract.*

Periodontal Disease Risk Factors & Warning Signs

The American Dental Association offers the following information regarding risk factors for periodontal disease and tips for identifying the condition.

Some factors increase the risk of developing periodontal disease, including:

- Tobacco smoking or chewing
- Systemic diseases such as diabetes
- Some types of medication such as steroids, some types of anti-epilepsy drugs, cancer therapy drugs and some calcium channel blockers
- Bridges that no longer fit properly
- Crooked teeth
- Fillings that have become defective
- Pregnancy or use of oral contraceptives

The following warning signs can signal a problem:

- Gums that bleed easily
- Red, swollen, tender gums
- Gums that have pulled away from the teeth
- Persistent bad breath or bad taste
- Permanent teeth that are loose or separating
- Any change in the way that teeth fit together while biting
- Any change in the fit of partial dentures

It is possible to have periodontal disease and have no warning signs. That is one reason why regular dental checkups and periodontal examinations are very important. Treatment methods depend upon the type of disease and how far the condition has progressed. Good oral hygiene at home is essential to help keep periodontal disease from becoming more serious or recurring. Periodontal disease doesn't have to end in tooth loss. Brushing, flossing, eating a balanced diet and scheduling regular dental visits can make the difference for a lifetime of healthy smiles.

**Coverage for all benefits will be at the group-contracted benefit level, with the additional frequency allowance being the only change. There is no end date on this additional coverage, no age requirement and the patient may be the subscriber, spouse or other covered dependent. Check your plan description to see if you have this coverage.*

¹ Behrman, R, Stith-Butler, A. *Preterm Birth: Causes, Consequences, and Prevention*. Washington, D.C., The National Academies Press, 2006; 329.

² Stavros P, Ziyah M et al. *The impact of preterm birth on hospital inpatient admissions and costs during the first 5 years of life*. *Pediatrics*. 2003;112:1290-1297.

³ American Heart Association

⁴ National Kidney Foundation

⁵ Knowles JW, Burgett FG, Nissle RR et al. *Results of periodontal treatment related to pocket depth and attachment level Eight years J. Periodontology* 1979;50:225-233.

⁶ Fleszar TJ, Knowles JW, Morrison EC, Burgett FG, Nissle RFR, Ramfjord SP. *Tooth mobility and periodontal therapy*. *J Clin Periodontology* 1980;7:495-505.

⁷ Braegger, U. *Cost-benefit, cost-effectiveness and cost-utility analyses on periodontitis prevention*. *J Clin Periodontology*. 2005;32 Suppl 6:301-13. Review.

⁸ Delta Dental Data Analysis Center, 2004.

⁹ Axelsson P, Lindhe J, Nystrom B. *On the prevention of caries and periodontal disease. Results of a 15-year longitudinal study in adults*. *J Clin Periodontology*. 1991 Mar; 18(3):182-9.

Delta Dental of Illinois
801 Ogden Avenue
Lisle, IL 60532

www.deltadentalil.com

