



PERIODONTAL HEALTH SPECIALISTS, LLC

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Gum Disease and Osteoporosis



Osteoporosis may lead to tooth loss because the density of the bone supporting the teeth may be decreased.

Researchers have suggested that a link between osteoporosis and bone loss in the jaw. Studies suggest that osteoporosis may lead to tooth loss because the density of the bone that supports the teeth may be decreased, which means the teeth no longer have a solid foundation. However, hormone replacement therapy may offer some protection.

One [study published in the June 2007 Journal of Periodontology \(JOP\)](#) examined 1,256 postmenopausal women and looked for a potential association between periodontal bacteria and bone loss in the oral cavity. The study results showed that women with periodontal bacteria in their mouths were also more likely to have bone loss in the oral cavity, which can lead to tooth loss if not treated.

A [follow-up study of 106 postmenopausal women over more than 10 years](#) concluded they could significantly reduce tooth loss by controlling their periodontal disease.

Another [JOP study published in August 1999](#) concludes that estrogen supplementation in women within five years of menopause slows the progression of periodontal disease. Researchers have suspected that estrogen deficiency and osteopenia/osteoporosis speed the progression of oral bone loss following menopause, which could lead to tooth loss. The study concluded that estrogen supplementation may lower gingival inflammation and the rate of attachment loss (destruction of the fibers and bone that support the teeth) in women with signs of osteoporosis, thus helping to protect the teeth.

Bisphosphonates: Implications for Your Periodontal Therapy

Recently, there has been information in the news about taking bisphosphonates and the implications on your periodontal health. Below are some questions and answers about taking bisphosphonates, osteoporosis, and osteonecrosis of the jaw (the condition associated with taking bisphosphonates). It also links to helpful resources available online.

What are bisphosphonates?

Bisphosphonates, also known as bone-sparing drugs, are commonly used in the treatment of osteoporosis and cancer that has spread to the bone. Doctors prescribe intravenous bisphosphonate therapy for patients with cancer that has spread to the bone to help decrease associated pain and fractures. This intravenous therapy was the subject of precautions set out by the FDA. In addition, emerging research is exploring the ability of intravenous bisphosphonate therapy to inhibit the spread of some cancers to the bone.

What is osteonecrosis of the jaw (ONJ)?

This condition has been observed in individuals with cancer who undergo invasive dental procedures such as dental implants or tooth extractions while receiving treatment with intravenous bisphosphonates. ONJ can cause severe, irreversible and often debilitating damage to the jaw.

Who can develop ONJ?

The FDA recognizes additional risk factors associated with the development of osteonecrosis (not limited to the jaw) in cancer patients, such as female sex, advanced age, edentulous regions, combination cancer therapy, blood dyscrasias/metastatic disease, anemia coagulopathy, surgical dental procedures, and prior infection.

What is osteoporosis?

People diagnosed with osteoporosis have low or decreasing bone mass and must take extra care in performing day-to-day activities because they are at increased risk for bone fractures. Because bone

loss is associated with both osteoporosis and periodontal disease, it is questioned whether the two are related. The association has been difficult to prove because of the many similar risk factors for these two diseases, including smoking, age, medications, and systemic diseases.

What is periodontal disease?

Periodontal diseases are chronic bacterial infections that release toxins that cause redness and inflammation. This inflammation damages the gums and bone supporting the teeth and if left untreated can lead to tooth loss. Furthermore, this infection can travel throughout the body. In fact, periodontal diseases have been linked to other inflammatory conditions such as cardiovascular disease, diabetes, and rheumatoid arthritis..

The main cause of periodontal diseases is bacteria in dental plaque, a sticky colorless film that constantly forms on the teeth. Plaque buildup can lead to the earliest and mildest form of the disease, gingivitis. During this stage, the gum tissue can swell, turn red, and bleed easily, causing little or no discomfort. Gingivitis is reversible with professional treatment and good at-home oral hygiene. Without this care, you may put yourself at risk for more severe forms of periodontal disease. Periodontists are the dental professionals who specialize in treating periodontal disease.

How should a periodontist treat someone who is taking bisphosphonates?

The decision about what treatment you should receive must be made by a periodontist in the exercise of his or her best judgment. However, in light of the precautions, periodontists are advised to determine whether you are receiving intravenous bisphosphonate therapy. If so, invasive dental procedures should be avoided unless absolutely necessary. Conversely, if a periodontist becomes aware that you are going to be treated with intravenous bisphosphonates, any needed invasive dentistry should, if possible, be performed before the initiation of such treatment. Finally, periodontists should endeavor to identify ONJ and other oral complications of cancer and cancer therapy.