



# Keeping your teeth and gums healthy:

## Tips for patients with osteoporosis

**O**steoporosis is a condition that affects many patients, especially older women, and is characterized by decreased bone density and enlargement of bone spaces leading to brittleness. Increasing evidence suggests that osteoporosis may impact periodontal (gum) disease and lead to tooth loss. This is because the density of the bone that supports the teeth may be decreased, meaning the teeth no longer have a solid foundation. Appropriate treatment for osteoporosis, as prescribed by your doctor, such as hormone replacement therapy, combined with good oral health can help offset the potential effects of osteoporosis on periodontal health.<sup>1</sup>

### What is periodontal (gum) disease?

Periodontal diseases are infections of the gums, bones and fibers that attach the tooth to the bone and hold them in the jaw. The leading cause of these diseases is plaque, a sticky, bacteria-containing film that forms on teeth. If the plaque is not removed every day by good brushing and flossing, it can anchor to teeth and harden into tartar (calculus) which, in turn, collects more plaque. The bacteria in plaque release toxins which, along with the body's own defenses against bacteria, irritate the gums, causing inflammation and infection. Smoking can make these symptoms worse, particularly for patients with chronic health conditions such as heart disease.

### Common signs of periodontal (gum) disease include:

- Red swollen gums that are tender to the touch and bleed during brushing and flossing
- Gums that have pulled away from the tooth leaving more tooth structure (the crown and/or the roots) exposed
- Milky-white or yellowish plaque deposits which are usually heaviest between the teeth
- Pus around the teeth, along with tenderness and swelling in the gum area, which can be very painful and cause rapid, severe tissue damage
- Loose or sensitive teeth
- A bite that feels different
- A foul, offensive odor from the mouth

If you are experiencing these symptoms, you should talk with your dentist or periodontist.

### How could osteoporosis affect your teeth and gums?

Over the last 10 years, evidence has shown that osteoporosis can impact oral health and that treating osteoporosis may positively impact dental and periodontal health. As early as 1999, an American Academy of Periodontology (AAP) study noted that estrogen supplementation in women within five years of menopause may slow the progression of periodontal disease. However, Dr. Robert Schoor, then AAP President, also notes that, "While the study points to another possible benefit of hormone replacement therapy, women also need to consider the risks. Women should speak to their physicians...to help determine if estrogen supplementation is a good option for them."<sup>2</sup>

A 2001 research article notes how individual patient factors may influence when periodontal disease starts, and how it progresses. These include low bone density in the mouth, bone loss resulting from inflammation due to infection, genetic predisposition, and other risk factors (smoking, for example). Overall loss of bone density due to osteoporosis, including in the mouth, may increase a patient's susceptibility to destruction resulting from infection, including periodontal disease.<sup>3</sup>

A 2006 research paper indicates that for patients with periodontal disease who also have osteoporosis, there is the possibility that the lack of the hormone estrogen influences the activities of bone cells and immune cells in such a way that the progression of bone loss associated with periodontal disease will be enhanced.<sup>4</sup>

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What most of these studies have in common is that they appear to indicate that the skeletal bone loss associated with osteoporosis increases the speed of bone loss in the mouth, leading to breakdown and eventual tooth loss. Although there are differences in the origins of these two diseases, as mentioned earlier, an increasing number of studies are showing that treatment of osteoporosis improves periodontal health.<sup>5</sup>

### What will your dentist or periodontist (gum specialist) do for you?

Gum diseases are increasingly seen as a complication associated with osteoporosis. It is therefore important for patients with osteoporosis to keep up with their dental appointments, to be aware of the treatment options, and to keep their dentist and/or periodontist informed of any changes in dental or overall health. As someone with osteoporosis, it is helpful to keep the following in mind:

1. Establish and maintain a healthy mouth. Practice good oral hygiene and visit your dentist regularly.
2. Make sure your dentist knows you have osteoporosis.
3. Carefully follow your physician's and dentist's instructions when they prescribe any medications.

Early stages of treatment may include scaling and root planing, where plaque and tartar are removed from the pockets around the teeth and root surfaces are smoothed. Some patients may need to have additional treatments if their disease is more advanced. Patients with existing osteoporosis may need to have treatments specifically tailored to their condition.

Patients with osteoporosis should bring their medication when visiting the dentist, and should discuss their osteoporosis and all medications with their dentist as these might affect the course of treatment. Most likely, the patient's dentist and physician will work together to discuss treatment options and decide on the best approach.

### What are bisphosphonates, and are they something you should be concerned about?

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. Recently, there has been increasing attention given to these medications as they have been associated, on rare occasions, with a condition known as osteonecrosis of the jaw (ONJ). Osteonecrosis literally means death, or necrosis of bone, and has been observed in cancer patients 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.

Doctors also prescribe an oral dose of bisphosphonates for patients at risk for osteoporosis to help delay the onset of disease by slowing the natural progression of bone tissue destruction, or to reduce its complications. It is important to note that orally administered bisphosphonates were not the subject of recent recommendations by the Food and Drug Administration (FDA).

The decision about what treatment to provide must be made by your dentist or periodontist, exercising his or her best judgment on your behalf. However, in light of the precautions, it is important to let your dentist know if you are taking these medications.<sup>6</sup>

### What can you do to keep yourself healthy?

In addition to following the advice of their physician, dentist and periodontist, patients with osteoporosis can take the following steps on their own to keep their teeth and gums healthy:

- Brush after each meal and snack, using a soft-bristle toothbrush.
- Use dental floss at least once a day.
- If you have dentures (false teeth), be sure to keep them clean.
- Ask your hygienist, dentist and/or periodontist for advice on how best to keep your teeth and gums clean.
- Have your teeth professionally cleaned on a regular basis — twice a year for most patients. If you have gum disease, more frequent cleanings might be suggested.
- Tell your dentist about any problems you might be having with your teeth and gums and have them taken care of right away.
- Let your dentist know if you have gums that are red, sore, bleeding or pulling away from your teeth.
- Tell your dentist you have osteoporosis.
- If you are a smoker, work with your physician to try to quit.

Keeping teeth and gums healthy will help to fight the effects of osteoporosis on your mouth. Good dental habits not only lead to a healthy mouth, but also good overall health.

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