

## Osteoporosis medications and oral health

**A**s we age, our bones begin to lose density and strength, especially after age 50 years. Many factors affect bone density, including diet, physical activity, family history, hormones, lifestyle and certain conditions and medications.

Osteoporosis, or porous bone, is a disease that weakens bones and makes them more apt to break. The disease affects about 10 million Americans and causes more than 2 million fractures each year. Another 34 million Americans have low bone density and are at risk of developing osteoporosis. The National Osteoporosis Foundation estimates that one in two women and one in four men older than 50 years are at risk of breaking a bone as a result of osteoporosis.<sup>1</sup>

Broken bones affect the quality of life. The chance of dying is greater when the spine or hip bones break. Many people with low bone density or osteoporosis take a medication from a group of drugs called bisphosphonates. They include alendronate (Fosamax, Merck & Co., Whitehouse Station, N.J.), ibandronate (Boniva, Roche Laboratories, Nutley, N.J.), risedronate (Actonel, Procter & Gamble Pharmaceuticals, Cincinnati) and zoledronic acid (Reclast, Novartis Pharmaceuticals, East Hanover, N.J.).

Studies indicate that for many people, these drugs help reduce the chance of breaking bones by decreasing bone loss and increasing bone density. Some reports estimate that these medications reduce the chance of breaking a hip by as much as 40 to 50 percent in people with osteoporosis. As a result, bisphosphonates could prevent nearly 100,000 hip fractures and many fracture-related deaths each year.

### OSTEONECROSIS OF THE JAW

In recent years, dentists have reported a condition known as osteonecrosis of the jaw (ONJ) in some patients who have taken these medications. Bisphosphonate-associated osteonecrosis of the jaw (BON) is a rare but serious condition that can cause severe damage to the jaw bone. BON is

diagnosed in a patient who

- has an area of exposed jaw bone that persists for more than eight weeks;
- has no history of receiving radiation therapy to the head and neck;
- is taking, or has taken, a bisphosphonate.

Ninety-four percent of people diagnosed with BON are patients with cancer who received repeated high doses of intravenous bisphosphonates. The other 6 percent were treated with oral bisphosphonates.

The U.S. Food and Drug Administration recently approved Reclast for once-a-year intravenous use by patients with osteoporosis. At present, a patient's chance of developing BON with use of this medication is unknown. Because the dose for osteoporosis is much lower and less frequently administered than the dose administered to patients with cancer, it is likely that BON will be much less common in patients with osteoporosis. More information is needed, however.

### TELL YOUR DENTIST, TALK TO YOUR PHYSICIAN

Tell your dentist if you are taking a bisphosphonate medication. The medical and dental communities continue to research how to prevent and treat BON to ensure the safety of patients taking bisphosphonate medications.

Your physician or other health care provider is the best source of information regarding your need for bisphosphonate medications. Do not stop taking these medications without speaking to your physician or other health care provider. If you have osteoporosis or are at high risk of breaking bones, the benefits of these medications outweigh the low risk of developing BON. There is no known prevention for BON at present. However, regular dental visits and practicing excellent oral hygiene may be the best ways to reduce your risk. ■

1. National Osteoporosis Foundation. Osteoporosis fast facts. "www.nof.org/osteoporosis/diseasefacts.htm". Accessed April 29, 2009.

Prepared by the American Dental Association Division of Science. Copyright © 2009 American Dental Association. Unlike other portions of JADA, this page may be clipped and copied as a handout for patients, without first obtaining reprint permission from the ADA Publishing Division. Any other use, copying or distribution, whether in printed or electronic form, is strictly prohibited without prior written consent of the ADA Publishing Division.

"For the Dental Patient" provides general information on dental treatments to dental patients. It is designed to prompt discussion between dentist and patient about treatment options and does not substitute for the dentist's professional assessment based on the individual patient's needs and desires.