

Bisphosphonate Therapy

Overview

Bisphosphonate drugs are used to treat *osteoporosis*, a condition in which your bones become weak and your risk for bone fractures increases, in postmenopausal women. The stronger bisphosphonates may be used in the treatment of metastatic cancer (mostly breast and prostate) and myeloma.

How they work

There are two kinds of bone cells – *osteoblasts* that make bone and *osteoclasts* that break down bone. The creation and destruction of bone (remodeling/bone turnover) is generally kept in balance, though we tend to lose bone mass as we age.

Some cancers cause the osteoclasts to speed up bone destruction. This can weaken your bones (increasing your risk of fracture and pain) and release too much calcium into your bloodstream. Too much calcium in your blood can affect your heart rate and other bodily functions.

Bisphosphonates work by preventing bone breakdown and increasing bone density (thickness). Stopping the remodeling/bone turnover process prevents cancer from spreading in bone. Because jaw bones have a greater blood supply than other bones and a faster bone turnover rate, bisphosphonates are highly concentrated in the jaws.

Osteonecrosis

Osteonecrosis is the death of bone. Usually, patients do not have pain but they may develop severe pain if the “dead” bone becomes infected after it is exposed.

Prevention

As soon as your doctor prescribes bisphosphonate therapy, you should be referred to a dentist for an examination. Treatment is aimed at eliminating infections and preventing the need for invasive dental treatment in the near future. This may include extractions, periodontal surgery, root canals, cavity control, and tooth restorations. Generally, noninvasive restorations do not need to delay bisphosphonate therapy.

During Treatment

If you are receiving bisphosphonates, see your dentist every 3-4 months. **Preventive dental care is very important.**

What you can do to take care of your mouth

- ✓ Take responsibility for your own oral care
- ✓ Brush and floss every day
- ✓ Maintain well-fitting dentures
- ✓ **Get regular dental checkups**
- ✓ Do not smoke
- ✓ Be careful not to let your mouth get too dry

Risk Factors

If you are getting IV bisphosphonates for metastatic breast cancer or multiple myeloma, you're at higher risk for osteonecrosis if you:

- have osteoporosis or vascular (blood vessel) disease
- are currently receiving chemotherapy treatment
- have poor dental health
- smoke
- have a tooth extraction

What else should I know about bisphosphonates?

- Bisphosphonates
 - change the calcium balance in people who have bone disease.
 - reduce bone pain and prevent fractures of bones especially the spine and hip.
 - do enormous good when used for the right reasons.
- While bisphosphonates are associated with osteonecrosis of the jaw, we do not know precisely why this occurs. In many cases, tooth extraction is the precipitating event. Try to have dental treatments other than having your tooth pulled whenever possible and avoid bony surgery such as implants.
- See your dentist before you begin your bisphosphonate treatment. Make sure your dentist is familiar with the treatment you need.
- Consult an oral and maxillofacial surgeon **and** your dentist, if you develop symptoms of pain, swelling, loose teeth, or exposed bone.