



# Bisphosphonates for Osteoporosis: Benefits and Risks

## WHAT IS OSTEOPOROSIS?

Osteoporosis is a condition in which your bones become weak, increasing the risk of fractures (broken bones). Throughout life, your body continuously removes old bone and replaces it with new bone. But if your body can't rebuild bone fast enough, your bones get weak. Weak bones can break easily when you have a minor fall. Bone fractures can be serious. They can affect your ability to move, walk, and care for yourself.

Women who have gone through menopause are especially at risk of developing osteoporosis. Osteoporosis is more common in women than in men. Other risk factors include

- Being thin
- Being white or Asian
- Being inactive
- Not getting enough calcium and vitamin D
- Smoking cigarettes
- Drinking more than three alcoholic beverages per day
- Having a family history of osteoporosis
- Taking prescription steroid medicines, such as prednisone or cortisone, for a long time

A bone mineral density test can show whether you have weak bones or osteoporosis. Treatment includes exercising regularly, getting enough calcium and vitamin D, and learning how to prevent falls. Some people also need medicines.

## DID YOU KNOW?

**Weak bones can break for no reason at all (called a fragility fracture). People who have had a fragility fracture are at risk for more fractures.**

## WHAT ARE BISPHOSPHONATES AND WHAT ARE THEIR BENEFITS?

Bisphosphonates are the kind of medicine used most often to treat osteoporosis. They keep bones strong by slowing the natural breakdown of bone. Bisphosphonates lower the risk of spine fractures and most lower the risk of hip fracture as well.

Several types of bisphosphonates are available, in pill or liquid form. Some are given intravenously (IV), which means the medicine is injected into a vein at the doctor's office or a hospital.

### TYPES OF BISPHOSPHONATES

Generic Names	Forms	Frequency
Alendronate	Pill or oral liquid	Daily or weekly pills, or weekly liquid
Ibandronate	Pill or IV	Monthly pills, or IV every 3 months
Risedronate	Pill	Daily, weekly, or monthly
Zoledronic acid	IV	Once a year

## WHAT SIDE EFFECTS DO BISPHOSPHONATES HAVE?

Side effects of bisphosphonates can include

- Nausea, heartburn, swallowing problems, or irritation of the esophagus (the tube that carries food and liquid from your mouth to your stomach)
- Pain in the muscles, joints, bones, or stomach

Some people have reported serious side effects, but studies have shown that these are very rare:

- ONJ (osteonecrosis of the jaw), a severe breakdown of bone in the jaw, usually after a major dental procedure
- Fractures of the thigh bone

## WHAT CAN YOU DO ABOUT SIDE EFFECTS?

If you take a bisphosphonate and you're having side effects, tell your doctor. Your doctor might give you a different kind of medicine to overcome the side effects. For example, taking medicine through an IV instead of swallowing a pill can overcome heartburn.

You can prevent serious problems by

- Telling your doctor about health problems you've had in the past (to help the doctor choose the best medicine for you)
- Telling your doctor about dental problems or dental surgery
- Calling your doctor if you have unusual pain in your thigh or hip
- Always taking your medicine as instructed
- Having regular checkups

## WHAT OTHER TREATMENT OPTIONS ARE AVAILABLE?

Other medicines for osteoporosis include

- Denosumab, a medicine that slows bone breakdown and reduces the risk of fractures, including hip fractures
- Estrogen, a hormone that slows bone breakdown (used only by women who already take it to treat menopausal symptoms)
- Raloxifene, a medicine that slows bone breakdown and reduces the risk of some types of fractures

- Teriparatide, a medicine that stimulates new bone growth and reduces the risk of some types of fractures
- Calcitonin, a hormone that slows bone loss

Your doctor can talk with you about the risks and benefits of each of these medicines.

## WHAT DO EXPERTS SAY ABOUT TAKING BIPHOSPHONATES?

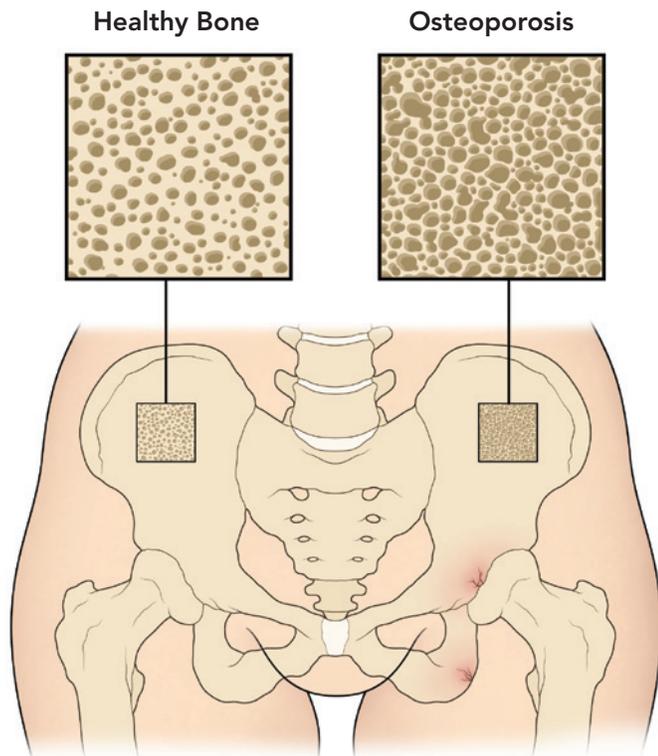
Experts say that the benefits of taking bisphosphonates outweigh the risks for most people with osteoporosis. Overall, when you take this type of medicine, your chance of preventing fractures is high and the risk of serious problems is low.

## Questions to ask your doctor

- Do I need medicines for osteoporosis?
- What type of medicine do I need?
- What are the risk and benefits of my medicine?
- How often should I have a bone density test?
- Should I take calcium and vitamin D supplements? How much do I need?
- What else can I do to keep my bones strong?
- Should I see an endocrinologist?

## RESOURCES

- Find-an-Endocrinologist: [www.hormone.org](http://www.hormone.org) or call 1-800-HORMONE (1-800-467-6663)
- Hormone Health Network information on osteoporosis: [www.hormone.org/Osteoporosis/index.cfm](http://www.hormone.org/Osteoporosis/index.cfm)
- National Institutes of Health (NIH) Osteoporosis and Related Bone Diseases National Resource Center: [www.niams.nih.gov/Health\\_Info/Bone/Osteoporosis/overview.asp](http://www.niams.nih.gov/Health_Info/Bone/Osteoporosis/overview.asp)
- Mayo Clinic: [www.mayoclinic.com/health/osteoporosis/DS00128](http://www.mayoclinic.com/health/osteoporosis/DS00128)
- The National Osteoporosis Foundation: [www.nof.org](http://www.nof.org)



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The Hormone Health Network offers free, online resources based on the most advanced clinical and scientific knowledge from The Endocrine Society ([www.endo-society.org](http://www.endo-society.org)). The Network's goal is to move patients from educated to engaged, from informed to active partners in their health care. This fact sheet is also available in Spanish at [www.hormone.org/Spanish](http://www.hormone.org/Spanish).

