## I Am Concerned About Osteoporosis: What Do I Need to Know?

#### What Is Osteoporosis?

Osteoporosis is a medical condition that causes bones to become weak and thin, making them more likely to fracture. Risk for fractures is increased in many bones, particularly those of the hip and spine. Fractures can lead to pain, disability, loss of independence, and even death. Osteoporosis does not cause symptoms, and many people with osteoporosis may not be aware that they have it. It is common, affecting more than 10 million Americans.

#### Am I at Risk for Developing Osteoporosis?

Postmenopausal women and older adults are at the highest risk for developing osteoporosis. It less commonly affects men and young people. Other risk factors include being White, being underweight, a history of cigarette smoking, excess alcohol consumption, certain medical conditions or medications, and a family history of osteoporosis.

#### How Is Osteoporosis Diagnosed?

Osteoporosis can be diagnosed by a dual-energy X-ray absorptiometry (DXA). It can also be diagnosed in persons with certain types of fractures, regardless of the DXA result. If you are diagnosed with osteoporosis, your health care professional may recommend tests to look for other conditions that can cause bone loss.

#### What Is the Treatment for Osteoporosis?

Treatment for osteoporosis involves lifestyle changes and sometimes medications. The goal of treatment is to reduce risk of fractures. Consumption of 1000 to 1200 mg of calcium is recommended daily. Dairy products and green leafy vegetables contain calcium. Daily vitamin D intake of 600 to 1000 international units is also recommended. Weight-bearing and balance exercises can also help, as well as not smoking and limiting alcohol intake.

The decision to treat with medications depends on the DXA results and your fracture risk. A class of medications called bisphosphonates are most commonly used to treat osteoporosis. They slow bone loss and reduce the risk of fractures. Bisphosphonates can be taken by mouth as a weekly or monthly pill, or through an intravenous infusion administered yearly. For most people, treatment will last 5 years for oral bisphosphonates and 3 years for intravenous bisphosphonates. Other medications are available to treat osteoporosis. Your health care professional may discuss these treatment options with you depending on your medical history.

# What Are the Potential Adverse Effects of Bisphosphonate Treatment?

Bisphosphonate medications are generally well tolerated, but should not be used by people with advanced kidney disease.

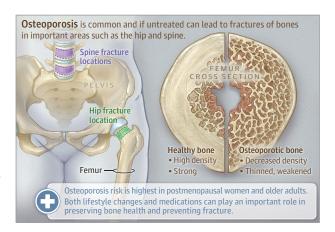
**Authors:** Katie L. Kaput, DO; Vishnu Sundaresh, MD, MS

Published Online: May 3, 2021. doi:10.1001/jamainternmed.2021.1628

**Author Affiliations:** Division of Endocrinology, Metabolism, and Diabetes University of Utah School of Medicine, Salt Lake City.

Conflict of Interest Disclosures: Dr Sundaresh reported grants from Radius Health, Inc outside the submitted work. No other disclosures were reported.

Section Editor: Michael Incze, MD, MSEd.



#### FOR MORE INFORMATION

National Institute on Aging

https://www.nia.nih.gov/health/osteoporosis

National Osteoporosis Foundation

https://www.nof.org/patients/what-is-osteoporosis/

Bisphosphonate pills may cause nausea and heartburn. Intravenous bisphosphonates may cause fever and muscle aches. These are not dangerous and usually resolve in a few days. Staying hydrated and taking acetaminophen as needed may be helpful to treat the symptoms. Bisphosphonates may increase your chance of developing certain types of fractures and jaw problems. These adverse effects are very rare, especially if treatment is limited to the recommended time course. If jaw or thigh pain occurs, your medical professional should be notified. In most people with osteoporosis, the benefits of taking medication greatly outweigh the possible risks.

### Is Follow-up Care Needed?

People with osteoporosis should have routine follow-ups with their medical provider to review their diet, physical activity, and optimal choice and duration of treatment with medications. Your doctor will discuss how to reduce your risk of falling, which is a major risk factor for fractures related to osteoporosis. They may also discuss the need for a follow-up DXA with you.

The JAMA Internal Medicine Patient Page is a public service of JAMA Internal Medicine. The information and recommendations appearing on this page are appropriate in most instances, but they are not a substitute for medical diagnosis. For specific information concerning your personal medical condition, JAMA Internal Medicine suggests that you consult your physician. This page may be photocopied noncommercially by physicians and other health care professionals to share with patients. To purchase bulk reprints, email reprints@jamanetwork.com.