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Making the Most of Retirement Living

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Overcoming Osteoporosis

A bone fracture is often the first sign of this complex disease. Exercise, a fortified diet, and a “no-fall” strategy are the best ways to defend yourself.

By Patricia Prijatel

Doctors call osteoporosis a “silent disease.” Patients often don’t know their bones are weak until they fracture—and sometimes not even then. Seventy percent of vertebral fractures cause no pain and those affected don’t even know they’re injured, says Felicia Cosman, MD, medical director at the Clinical Research Center of Helen Hayes Hospital in West Haverstraw, New York. “People do not even complain,” she says. “They say, ‘I had some pain, but it went away.’”

Although it is primarily a disease of aging, osteoporosis can affect women and men at any age. It can involve any bone, but hip fractures are of special concern because they can lead to dependency and even death.

Assessing Your Risk

“Osteoporosis would not be a prominent disease if we did not fall,” says Robert Recker, MD, director of the Osteoporosis Research Center at Creighton University Medical Center in Omaha. “This is largely a disease of fracture due to falls.”

Risk factors include a sedentary lifestyle, use of alcohol and caffeine, and smoking. Cortisonelike drugs, such as prednisone, can weaken bones, Recker says, as can antimetabolic drugs used in chemotherapy. Chronic diseases, such as rheumatoid arthritis and ulcerative colitis, are risk factors, too.

If a close relative has osteoporosis, chances are you will, too. “It is highly inheritable,” Recker says. The genetic influence is complex, though, with genes for inheritable traits, such as height and skeletal structure, interacting with others specific to a tendency to fracture easily. “There are so many genes involved, and no one gene has been found to have a dominant influence,” Recker says. “It is an issue of genes interacting with other genes and with environmental factors.”

1200 mg of Prevention

Calcium and vitamin D can reduce the risk of fractures after menopause by 40 to 55 percent, according to the Omaha Nuns Study, a long-term project tracking calcium intake by a group of middle-age women. Calcium strengthens bones, while vitamin D optimizes the body's use of calcium. The National Osteoporosis Foundation (NOF) recommends adults get a minimum of 1,200 mg of calcium a day from all sources. Start with diet—dairy products; vegetables such as broccoli; and fortified orange juice, cereal, and bread—and take supplements to make up the difference. Get 800 to 1,000 units a day of vitamin D.

Aerobic, weight-bearing, and muscle-strengthening exercises also build bone; Cosman recommends walking or jogging if you are able, and working with free weights, weight machines, Pilates, or yoga. Good form is critical to avoid injury. Check with your doctor before starting an exercise regimen.

The best defense may be a no-fall offense. The NOF recommends wearing rubber-soled, low-heeled shoes; removing obstacles, such as limiting the number of throw rugs in your house (and making sure they grip the floor); and keeping your home well lit, including using nightlights. Australian researchers say using only single-lens eyeglasses when walking outdoors, rather than bifocals, can reduce the rate of falls by 40 percent.

Understanding Testing

Osteoporosis is typically diagnosed through a bone mineral density (BMD) test using a central DXA, or dual-energy x-ray absorptiometry machine, which will identify low bone mass. Recker says this tells only part of the story, however. "Much, but not all, of the propensity to fracture is attributable to low bone mass," he says. Other factors may be even more important, he says, such as central nervous defects that cause you to fall.

To determine an individual's risk of osteoporosis, doctors use a fracture risk assessment tool called FRAX, developed by the World Health Organization, which analyzes factors such as age, height, weight, bone density, prior fractures, and other diseases such as rheumatoid arthritis.

Once you've been diagnosed, blood and urine tests can help define specific attributes of your bones, such as how fast they create new bone, which can determine the proper treatment for your specific case, Recker says.

A doctor may say you have osteopenia, but that's not a disease and typically needs no treatment, Cosman says: "It means the bone mass is a little lower and it needs to be watched. If you lose bone at a rapid rate, you may end up with osteoporosis; but, by and large, osteopenia does not need to be treated with drugs."

Medical Treatment

Medications for osteoporosis are as complex as the disease they treat. Some come as a nasal spray, others as oral tablets; still others are injected. However, osteoporosis drugs have to meet more rigorous tests than many drugs for other diseases, says Eric J. MacLaughlin, PharmD, associate professor and head of adult medicine at Texas Tech University's School of Pharmacy. They have to demonstrate in clinical trials that they actually reduce the risk of fracture; improved results on a BMD test are not enough, he says.

Four categories of drugs (known by their brand names) are used to treat osteoporosis: bisphosphonates (Fosamax and Boniva); selective estrogen regulation modulators, or SERMs (Evista); antiresorptive medications (Prolia, Fortical, Miacalcin); and hormone therapy (Prempro, Premarin).

Bisphosphonates have come under scrutiny recently because of reports that they cause atypical fractures of the femur (the thigh bone). But, MacLaughlin says, tests by the FDA have shown no significant risk to the drugs, especially considering their ability to reduce hip fractures, which can be deadly. “Keep in mind the overall benefit,” he says. Recker agrees: “Atypical fractures are quite rare in comparison to the number of fractures they prevent.”

To assure the best and safest treatment, always tell your physician or pharmacist what other conditions you have and what drugs you are taking, McLaughlin says. For example, if you have had problems with blood clots, you should avoid SERMS, which act like estrogen on the clotting system. If you have gastroesophageal reflux disease (GERD), avoid oral bisphosphonates, as they can exacerbate your problems. And work with your health care professional if you have thyroid disease because calcium can interfere with absorption of some thyroid medications.

Follow the dosage instructions to reduce side effects, McLaughlin says. You can reduce the risk of GERD associated with bisphosphonates by taking them with a full glass of water and remaining upright. And your body cannot absorb too much calcium at one time. Most important, McLaughlin says, is to keep taking your medicine as prescribed. “Patients don’t feel they have weak bones, so they don’t take the medicine,” he says. “Then they fall and break their bones.”

BY THE NUMBERS

- 10 million Americans have osteoporosis
- 55 percent of those are over 50
- 80 percent are women
- 25 percent of patients with hip fractures die within months of their injuries; half of the remainder need help for daily activities, and 20 percent become completely dependent