

OSTEOPOROSIS

Building bones through diet, exercise, calcium/Vitamin D

One in two women and up to one in four men age 50 and older likely will break a bone due to osteoporosis

Of people who have a hip fracture, only 25 percent return to a normal way of life

Questions arise about drugs such as Fosamax

BY ALLISON HORTON
Special to the Miami Herald

On the morning of Feb. 23, Ada Rodriguez, 77, got out of bed and walked to her bathroom for a glass of water to take her high blood pressure medication. As she reached for the glass, she felt a very sharp pain in her left hip.

Her screams of pain brought her husband running to help her. He tried to help her sit on the toilet, but it was too painful for her to move.

"I told him don't even touch me," said Rodriguez, a homemaker and mother of two adult children and grandmother of two.

She was taken from her Westchester neighborhood home in Miami by ambulance to West Kendall Baptist Hospital where she learned that she suffered an atypical femur fracture that occurs in the long bone of the thigh.

Rodriguez was diagnosed a couple of years earlier with osteoporosis. According to the National Osteoporosis Foundation, it is a disease of the bones that occurs when a person's body loses too much and/or makes too little bone. The bones become weak and may break from a minor fall or, in serious cases, even from simple actions, like sneezing or bumping into

furniture.

About 10.2 million Americans have osteoporosis, and 43.4 million have low bone mass, placing them at increased risk for osteoporosis, according to the National Osteoporosis Foundation. Studies suggest that approximately one in two women and up to one in four men age 50 and older will break a bone due to osteoporosis. Osteoporosis-related fractures most commonly occur in the hip, wrist or spine.

To treat her osteoporosis, Rodriguez was prescribed a bisphosphonate, a group of medicines that include Fosamax, Actonel and Boniva, to strengthen her bones and help prevent fractures.

Dr. Roberto Miki, orthopedic hand surgeon at the Miami Hand Center, said bisphosphonates can greatly benefit patients who have osteoporosis.

"This drug saves lives," Miki said. "It cuts the risk in half of having a fracture."

Of the people who have had a hip fracture, only 25 percent return to a normal way of life, Miki said. Twenty-five percent die in the first year and 50 percent don't return to a normal way of life. Medical costs for a patient who has had a hip fracture can be about \$100,000.

"These drugs pay for themselves and then some," Miki said.

But there are side effects

from bisphosphonates. People can suffer from minor ailments such as heartburn, diarrhea, and muscle and bone ache. In rare cases, people who take bisphosphonates, which can slow the breakdown and re-absorption of bone, can experience sudden bone fractures such as an atypical femur fracture that Rodriguez experienced.

In 2010, the U.S. Food and Drug Administration warned patients and health-care providers about the possible risk of atypical thigh bone (femoral) fracture in patients who take bisphosphonates. While the FDA said at the time it was not clear whether bisphosphonates are the cause, the FDA stated the fractures may be related to use of bisphosphonates for longer than five years.

There are several tips to prevent fractures for patients taking bisphosphonates.

After five years on a bisphosphonate, a patient should be reevaluated and switched to another drug that is not a bisphosphonate or have a drug holiday, where usage of a drug is stopped for a time to decrease the risk of having an unusual fracture, said Rodriguez's doctor, Dr. Lauren Crocco, orthopedic trauma surgeon with Miami Orthopedics & Sports Medicine Institute at Baptist Health South Florida.

Usage of a bisphosphonate stops when a patient experiences an atypical femur fracture. In Crocco's experience, an atypical femur fracture can be slower to heal because the bisphosphonates change the biology of the bone and

Protect your bones by:

- Eating a well-balanced diet
- Getting enough calcium and vitamin D
- Doing weight-bearing exercises like weight training, running, walking, climbing stairs and dancing
- Avoiding smoking and limiting alcohol to 2 to 3 drinks a day

prevent the reabsorption of the bone. It usually takes six to 10 months for a patient who used bisphosphonates to heal from an atypical femur fracture compared to a patient with a regular hip fracture not on the drug, who usually heals in two to three months.

Rodriguez underwent surgery, where a rod was placed inside her femur to prevent the bone from moving while it is healing. Patients who have an atypical femur fracture should also have their other femur or thigh checked because there is a high incidence that it can occur in the other femur, Crocco said.

Patients taking bisphosphonates who need a tooth extraction or gum surgery should also take precaution. Another rare side effect of bisphosphonate use is osteonecrosis of the jaw, in which sections of the jaw bone deteriorate after dental work and don't heal. Study results vary from less than 1 in 100,000 getting osteonecrosis of the jaw from bisphosphonate therapy to 1 patient in 263,158, according to the American College of Rheumatology.

Patients should tell their dental professional their



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Ada Rodriguez, who broke her thigh bone, now does weight-bearing exercises at home and at physical therapy to try to regain her leg strength.

medication usage and if there have been any changes since their last visit, said Dr. David Genet, a periodontist in Aventura.

Based upon their doctor's recommendations, a patient may need to change their medication or have a drug holiday. Genet said he continues to perform surgery on patients on bisphosphonates because osteonecrosis is less likely compared to the tooth getting infected. If contracted, osteonecrosis is treatable with medication or surgery, if needed.

People can take steps to protect the health of their bones by eating a well-balanced diet, rich in calcium and Vitamin D, which absorbs calcium into the belly, said Dr. Alejandro Badia, an orthopedic surgeon and CEO and chief medical officer of Miami-based OrthoNow Orthopedic Urgent Care Centers. If needed, a patient should take calcium and Vitamin D supplements.

People should perform weight-bearing exercises such as walking, hiking, running, climbing stairs, weight training and dancing. These kinds of exercises force you to work against gravity, which builds up and strengthens your bones.

People should also avoid smoking and limit alcohol to two to three drinks per day, according to the National Osteoporosis Foundation.

These tips not only help bone health but also cardiovascular health. A proper balance of nutrients and trace minerals, such as calcium is needed for contraction of the muscles, including the heart, said Dr. Adam Splaver, a clinical cardiologist with private practices in Hollywood and Miami Beach.

"Everything is connected," Splaver said. "Metabolism, hormones, exercise, diet and good sleeping habits all play a part in cardiovascular health."