What doctors want patients to know about osteoporosis

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Bone health is a critical aspect of overall well-being, yet millions worldwide grapple with a silent threat that weakens bones: osteoporosis. This condition, often undetected until a fracture occurs, poses a significant risk, particularly among older patients. Being aware of the condition and knowing what preventive measures to take are key.

About 10 million Americans have osteoporosis and another 44 million have low bone density, which places them at increased risk of the disease, according to the National Osteoporosis Foundation. Meanwhile, half of women and up to 25% of men will break a bone in their lifetimes due to osteoporosis, according to the Bone Health and Osteoporosis Foundation.

The AMA's What Doctors Want Patients to Know™ series gives physicians a platform to share what they want patients to understand about today's health care headlines.

In this installment, Nancy Salloum Harrison, MD, a rheumatologist at Hattiesburg Clinic's The Arthritis Center–West, discusses what patients need to know about osteoporosis. Hattiesburg Clinic is a member of the AMA Health System Program, which provides enterprise solutions to equip leadership, physicians and care teams with resources to help drive the future of medicine.

It's weaker bones

"Osteoporosis is low bone mass, which means decreased bone strength and increased risk of fracture," Dr. Harrison said, emphasizing that "it's brittle bones."

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“Patients with osteoporosis have low bone mass due to disruption of the normal structure of the bone,” she explained, noting that “the spine, the hip and the wrist are the most common areas for a fracture to occur.”

Osteoporosis is a silent disease

That’s because “there are really no symptoms until you have a fracture, which you want to catch before that point,” Dr. Harrison said.

But “sometimes the first symptom is back pain, which could be a spinal compression fracture,” she said.

Postmenopausal women are at risk

“Osteoporosis is most common in women, usually affecting 50% of females over the age of 65 and one in four males over the age of 65,” Dr. Harrison said.

“The reason that osteoporosis is more common in females is because of the reduction in estrogen after menopause,” she said. “Low estrogen leads to increased bone loss.”

The disease worsens with age

It is important to note that “bone is constantly being remodeled, so we’re forming new bone while breaking down old bone,” Dr. Harrison said. “The bone is a live, mineralized tissue and we make most of our bone mass in our early years.

“By age 35, the rate of breakdown exceeds the rate of formation leading to bone loss. “Osteoporosis worsens with age for this reason” she added.

Bone mineral density will be measured

“Osteoporosis is usually diagnosed by measuring the bone mineral density and that is done by a” dual-energy X-ray absorptiometry (DEXA) scan, said Dr. Harrison. “That’s

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basically a five-minute test where the patient lays on a table and the machine will take two quick views of the spine and the hip."

"The DEXA scan measures your bone-mineral density or a T-score. she said, explaining that "a T-score more than 2.5 deviations below normal is considered osteoporosis. A T-score of less than -2.5 is osteoporosis."

"A T-score of -1.0 or greater is considered normal. But a T-score of -1.0 to -2.5 is considered osteopenia and many fractures occur in this category. If you have osteopenia on DEXA scan you may still need treatment if you have a high risk of fracture.

"That fracture-risk assessment tool is referred to as the FRAX score. This tool uses your personal risk factors in addition to your DEXA scan score to assess your risk of fracture in a 10-year period. This score can be mild, moderate or high," says Dr Harrison.

"If you have osteopenia and the FRAX score is high then osteoporosis treatment is recommended," she added. DEXA screenings should be repeated every two years.

Know when to get screened

"Women at 65 or older should start osteoporosis or bone density screening," Dr. Harrison said, noting "your primary care physician should start that screening process for you."

"Screening earlier than age 65 is recommended in women with risk factors for low bone mass," she said, noting "there is controversy over when to start screening in men, but most organizations recommend DEXA scan at 70 or earlier if they have increased risk factors for low bone mass."

High-risk should be screened early

"Patients at most risk for osteoporosis are going to be postmenopausal females older than 65, but there are women less than 65 that are at increased risk. Those who have a family history of osteoporosis are at higher risk, so they may require screening earlier," Dr. Harrison said. "Females with premature menopause, smoking or heavy drinking history are

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at increased risk and may need to get screened earlier."

"Patients who have medical problems like hyperthyroidism, diabetes, vitamin deficiencies and eating disorders are at higher risk. People who have had bariatric surgery, patient with cancer, celiac disease, autoimmune disease such as rheumatoid arthritis are all at higher risk," she said.

Additionally, "females with a small body frame have increased risk because they have low bone mass compared to the average person due to their small size," Dr. Harrison said, noting females who are white or of Asian race are most at risk for osteoporosis."

It's important to note that racial and ethnic disparities exist in the screening, diagnosis, and treatment of osteoporosis.

Certain medications increase risk

There is "quite a long list of medications that increase your risk of osteoporosis," said Dr. Harrison. For example, "corticosteroid use long term can increase the risk of osteoporosis.

"And then there are medications you wouldn't think about like diuretics, which is a common blood-pressure medication," she added, noting "certain seizure medications, blood thinners and even proton-pump inhibitors that we use for acid reflux can increase your risk of osteoporosis."

"Patients on these medications long term should be screened earlier for osteoporosis," Dr. Harrison said.

A fragility fracture is a sure sign

"A second way to be diagnosed with osteoporosis is if you have a fragility fracture." A fragility fracture is a fracture from a fall at a standing height," said Dr. Harrison. For example, "tripping over your feet or twisting your ankle stepping of a curb.

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“We are not supposed to fracture from a low impact fall while walking, but if you have osteoporosis and your bones are too fragile, you will fracture with simple injuries, hence the term fragility fracture” she added. “If you have a fragility fracture … it doesn't matter what the T-score is or what the DEXA shows, that is an automatic diagnosis of osteoporosis.”

Treatment varies

“There are several options for treatment. Their mechanism of action varies but they either build bone or block the rate of breakdown,” Dr. Harrison said. For example, there are several bone-resorption medications, “and these medications block the rate of bone breakdown.

“Osteoporosis medications can be given as an oral medication, intramuscular injection or given through an infusion,” she said.

In the end, all these medications have the same goal which is to reduce the fracture risk.

Avoid high-risk trauma

If you have osteoporosis, it is best to avoid “anything that is high risk for trauma,” Dr. Harrison said. That means “heavy lifting and jumping.

“I’ve had a patient who jumped on the trampoline with her granddaughter and broke her back,” she added. “Even simple things such as lifting windows, opening car doors can cause a spinal fracture in osteoporosis patients.”

“You can also decrease your fall risk at home by eliminating unnecessary furniture, removing clutter, avoid use of loose rugs and making sure your halls are well lit,” said Dr. Harrison.

Do weight-bearing exercise

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“Weight-bearing exercise helps with the bone-remodeling process,” Dr. Harrison said. “Any kind of exercise against gravity like walking, yoga, Pilates or tai chi can do that.

“The recommendation is two and a half to three hours a week of weight bearing exercise,” she added. “I usually tell patients that 30 minutes, five times a week is sufficient. Even just strolling around the neighborhood is considered weight-bearing exercise.”

Increase calcium and vitamin D

These are both “important for bone remodeling,” Dr. Harrison said, noting “you can get calcium from dietary sources, or you can take supplemental calcium.”

“Calcium comes from dark green, leafy vegetables, seafoods—such as salmon—soy products such as tofu, low-fat dairy products and citrus,” she said. “You want to get about 1,200 milligrams of calcium per day. You can get that from your diet or vitamin supplementation.

“If you plan to use supplementation it is best to split the dosing because it’s absorbed better at 600–800 milligrams at a time,” Dr. Harrison added. “Vitamin D is very important for bone strength. It can be found in some seafoods—like salmon, trout and cod—liver oil and many types of our milk are fortified with vitamin D. But mostly vitamin D comes from sunlight.”

For vitamin D from the sun, aim for being outside for five to 30 minutes a day.

“If you have osteoporosis, lifestyle measures such as adjusting your diet and increasing exercise is very important, but in the end, you’re probably going to need to be on medication to lower that risk of fracture,” she said.

Stop smoking and drinking

These two activities put patients at higher risk for osteoporosis and worse outcomes. That is why, in addition to making lifestyle changes to exercise and diet, if you smoke, stop. And if you drink, limit what you consume.

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“If you drink more than two drinks per day, such as a beer or a glass of wine, that increases your risk of osteoporosis,” Dr. Harrison said.

Osteoporosis is a lifelong disease

“Once you're diagnosed, it's a lifelong disease, so it is important to make lifestyle adjustments with diet and exercise to reduce your risk of fracture,” Dr. Harrison said. “Medications help reduce this risk as well and you will need regular follow up with either your primary care physician or rheumatologist, whoever's treating you long term.”

Your physician “will need to monitor your response to treatment with repeat bone densities every two years,” she added.

You may need an emergency visit

“If you have osteoporosis and you have sudden onset of back pain, it's very likely that you've had a compression fracture even with a minor trauma,” Dr. Harrison said. That includes “minor actions such as opening car doors, lifting windows and lifting heavy objects.

“People with severe osteoporosis can fracture very easily, so with sudden onset of unexplained pain—especially back pain—go to the ER to get X-rays as needed,” she added.

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