

Osteoporosis and Women's Health

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Abstract :

Osteoporosis is a disease that weakens bones to the point where they break easily-most often, bones in the hip, backbone (spine), and wrist. Osteoporosis is called a "silent disease" because you may not notice any changes until a bone breaks. All the while, though, your bones had been losing strength for many years.

Bone is living tissue. To keep bones strong, your body breaks down old bone and replaces it with new bone tissue. Sometime around age 30, bone mass stops increasing, and the goal for bone health is to keep as much bone as possible for as long as you can. As people enter their 40s and 50s, more bone may be broken down than is replaced.

A close look at the inside of bone shows something like a honeycomb. When you have osteoporosis, the spaces in this honeycomb grow larger, and the bone that forms the honeycomb gets smaller. The outer shell of your bones also gets thinner. All of this makes your bones weaker.

Keywords : Osteoporosis, honey comb, gastric seflux.

Osteoporosis is a condition that affects the bones. Its name comes from Latin for "porous bones."

The inside of a healthy bone has small spaces, like a honeycomb. Osteoporosis increases the size of these spaces, causing the bone to lose strength and density. In addition, the outside of the bone grows weaker and thinner.

Osteoporosis can occur in people of any age, but it's more common in older adults, especially women. More than 53 million people in the United States either have osteoporosis

People with osteoporosis are at a high risk of fractures, or bone breaks, while doing routine activities such as standing or walking. The most commonly affected bones are the ribs, hips, and the bones in the wrists and spine.

Osteoporosis is a disease in which bones become weak and are more likely to fracture or break. It is called a "silent" disease because bone loss occurs often with you knowing it.

Until about age 30, your body forms enough new bone to replace the bone that is broken down by the body (bone turnover). The highest bone mass is reached between age 30 and 35, and it declines after that. After menopause, however, women begin to lose bone at an even faster rate.

Osteoporosis develops when your body cannot replace bone as fast as it is broken down.

Who is at risk for osteoporosis?

In the United States, 28 million Americans are at risk for osteoporosis. Ten million already have the disease. Women make up 80% of cases. Your risk for osteoporosis is higher if you have a family history of the disease and if you are:

- ❖ Postmenopausal (age 60 and older) or missing menstrual periods
- ❖ Thin or have a small frame
- ❖ Caucasian or Asian
- ❖ Taking steroid medications
- ❖ Eating a diet low in calcium and vitamin D
- ❖ Getting little or no exercise
- ❖ Smoking cigarettes
- ❖ Drinking too much alcohol

If you have gone through menopause, have had a fracture (bone break), have been taking hormone therapy for a long time, or are considering treatment for osteoporosis, a bone density test (DXA scan) can help determine your risk of fracture. If you are over 65 and do not have any of these other risk factors for osteoporosis, you should still have a bone density test.

Too much bone loss (osteoporosis) can lead to fractures, which can cause serious health risks, including disability and premature death.

Impact on home life due to osteoporosis

The extent to which osteoporosis affected the domestic life of those we talked to varied depending on the severity of their condition. Some people, particularly the elderly were restricted in what they could do in terms of household chores and how far they could walk, while others felt that osteoporosis had little or no impact on their lives. Here people described the effects of osteoporosis on their home life and how they have adapted to it

Some people who had been promptly diagnosed in the last few years, and either had mild osteoporosis or osteopenia, said that osteoporosis had little or no impact on their domestic and everyday life. Although they hadn't needed to change the way they did everyday things, like shopping, lifting and housework, their attitude had changed and now they were more cautious about carrying bags or lifting things from the floor. Carol said that now she bends down from her knees and lifts objects closer to her. When bending down to polish furniture, Diana is much more aware of being careful with her back. Only Keith

said that he is not consciously taking any more care than before.

Osteoporosis affects men and women of all races. But white and Asian women - especially older women who are past menopause - are at highest risk. Medications, healthy diet and weight-bearing exercise can help prevent bone loss or strengthen already weak bones.

Symptoms

There typically are no symptoms in the early stages of bone loss. But once your bones have been weakened by osteoporosis, you may have signs and symptoms that include:

- ❖ Back pain, caused by a fractured or collapsed vertebra
- ❖ Loss of height over time
- ❖ A stooped posture
- ❖ A bone fracture that occurs much more easily than expected

When to see a doctor

You may want to talk to your doctor about osteoporosis if you went through early menopause or took corticosteroids for several months at a time, or if either of your parents had hip fractures

Osteoporosis weakens bone

Your bones are in a constant state of renewal - new bone is made and old bone is broken down. When you're young, your body makes new bone faster than it breaks down old bone and your bone mass increases. Most people reach their peak bone mass by their early 20s. As people age, bone mass is lost faster than it's created.

How likely you are to develop osteoporosis depends partly on how much bone mass you attained in your youth. The higher your peak bone mass, the more bone you have "in the bank" and the less likely you are to develop osteoporosis as you age.

Risk factors

A number of factors can increase the likelihood that you'll develop osteoporosis - including your age, race, lifestyle choices, and medical conditions and treatments.

Unchangeable risks

Some risk factors for osteoporosis are out of your control, including:

Your sex. Women are much more likely to develop osteoporosis than are men.

Age. The older you get, the greater your risk of osteoporosis.

Race. You're at greatest risk of osteoporosis if you're white or of Asian descent.

Family history. Having a parent or sibling with osteoporosis puts you at greater risk, especially if your mother or father experienced a hip fracture.

Body frame size. Men and women who have small body frames tend to have a higher risk because they may have less bone mass to draw from as they age.

Hormone levels

Osteoporosis is more common in people who have too much or too little of certain hormones in their bodies. Examples include:

Sex hormones. Lowered sex hormone levels tend to weaken bone. The reduction of estrogen levels in women at menopause is one of the strongest risk factors for developing osteoporosis. Men experience a gradual reduction in testosterone levels as they age. Treatments for prostate cancer that reduce testosterone levels in men and treatments for breast cancer that reduce estrogen levels in women are likely to accelerate bone loss.

Thyroid problems. Too much thyroid hormone can cause bone loss. This can occur if your thyroid is overactive or if you take too much thyroid hormone medication to treat an underactive thyroid.

Other glands. Osteoporosis has also been associated with overactive parathyroid and adrenal glands.

Dietary factors

Osteoporosis is more likely to occur in people who have:

Low calcium intake. A lifelong lack of calcium plays a role in the development of osteoporosis. Low calcium intake contributes to diminished bone density, early bone loss and an increased risk of fractures.

Eating disorders. Severely restricting food intake and being underweight weakens bone in both men and women.

Gastrointestinal surgery. Surgery to reduce the size of your stomach or to remove part of the intestine limits the amount of surface area available to absorb nutrients, including calcium.

Steroids and other medications

Long-term use of oral or injected corticosteroid medications, such as prednisone and cortisone, interferes with the bone-rebuilding process. Osteoporosis has also been associated with medications used to combat or prevent:

- ❖ Seizures
- ❖ Gastric reflux
- ❖ Cancer
- ❖ Transplant rejection
- ❖ Medical conditions
- ❖ The risk of osteoporosis is higher in people who have certain medical problems, including:
- ❖ Celiac disease
- ❖ Inflammatory bowel disease
- ❖ Kidney or liver disease
- ❖ Cancer

- ❖ Lupus
- ❖ Multiple myeloma
- ❖ Rheumatoid arthritis

Lifestyle choices

Some bad habits can increase your risk of osteoporosis. Examples include:

Sedentary lifestyle. People who spend a lot of time sitting have a higher risk of osteoporosis than do those who are more active. Any weight-bearing exercise and activities that promote balance and good posture are beneficial for your bones, but walking, running, jumping, dancing and weightlifting seem particularly helpful.

Excessive alcohol consumption. Regular consumption of more than two alcoholic drinks a day increases your risk of osteoporosis.

Tobacco use. The exact role tobacco plays in osteoporosis isn't clearly understood, but it has been shown that tobacco use contributes to weak bones.

Prevention

Good nutrition and regular exercise are essential for keeping your bones healthy throughout your life.

Protein

Protein is one of the building blocks of bone. And while most people get plenty of protein in their diets, some do not. Vegetarians and vegans can get enough protein in the diet if they intentionally seek suitable sources, such as soy, nuts, legumes, and dairy and eggs if allowed. Older adults may also eat less protein for various reasons. Protein supplementation is an option.

Body weight

Being underweight increases the chance of bone loss and fractures. Excess weight is now known to increase the risk of fractures in your arm and wrist. As such, maintaining an appropriate body weight is good for bones just as it is for health in general.

Calcium

Men and women between the ages of 18 and 50 need 1,000 milligrams of calcium a day. This daily amount increases to 1,200 milligrams when women turn 50 and men turn 70. Good sources of calcium include:

- ❖ Low-fat dairy products
- ❖ Dark green leafy vegetables
- ❖ Canned salmon or sardines with bones
- ❖ Soy products, such as tofu

Calcium-fortified cereals and orange juice

If you find it difficult to get enough calcium from your diet, consider taking calcium

supplements. However, too much calcium has been linked to kidney stones. Although yet unclear, some experts suggest that too much calcium especially in supplements can increase the risk of heart disease. The Institute of Medicine recommends that total calcium intake, from supplements and diet combined, should be no more than 2,000 milligrams daily for people older than 50.

Vitamin D

Vitamin D improves your body's ability to absorb calcium and improves bone health in other ways. People can get adequate amounts of vitamin D from sunlight, but this may not be a good source if you live in a high latitude, if you're housebound, or if you regularly use sunscreen or avoid the sun entirely because of the risk of skin cancer.

Scientists don't yet know the optimal daily dose of vitamin D for each person. A good starting point for adults is 600 to 800 international units (IU) a day, through food or supplements. For people without other sources of vitamin D and especially with limited sun exposure, a supplement may be needed. Most multivitamin products contain between 600 and 800 IU of vitamin D. Up to 4,000 IU of vitamin D a day is safe for most people.

Exercise

Exercise can help you build strong bones and slow bone loss. Exercise will benefit your bones no matter when you start, but you'll gain the most benefits if you start exercising regularly when you're young and continue to exercise throughout your life.

Combine strength training exercises with weight-bearing and balance exercises. Strength training helps strengthen muscles and bones in your arms and upper spine, and weight-bearing exercises - such as

walking, jogging, running, stair climbing, skipping rope, skiing and impact-producing sports - affect mainly the bones in your legs, hips and lower spine. Balance exercises such as tai chi can reduce your risk of falling especially as you get older.

Swimming, cycling and exercising on machines such as elliptical trainers can provide a good cardiovascular workout, but they're not as helpful for improving bone health.

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