CASCADE MEDICAL
PARTNERS IN YOUR HEALTH

Osteoporosis

By Surabhi Nirkhe
UW medical student

Osteoporosis is a disease that weakens bones and increases the risk of fractures. Fractures later in life often cause people to become dependent on others for their care, prevent them from walking independently, and limit their social lives.

Osteoporosis commonly affects the hips, spine and wrists. Our bones are constantly growing and changing as we age. We reach our peak bone strength in our 20s, and we all start to lose bone after that point. Osteoporosis speeds up this process.

What are risk factors for it?

Women are at higher risk of developing osteoporosis. This is because women have lower bone mass to begin with, typically live longer than men, and go through menopause around the age of 51. Menopause marks a decrease in estrogen levels, a hormone that protects against bone loss. Therefore, many women have an increased fracture risk after menopause.

There are some risk factors for osteoporosis that cannot be changed. These include osteoporosis in the family, being Caucasian or Asian, being female, getting older, and having a small, thin frame.

However, most of the risk factors can be controlled. These include:

- Not enough calcium or vitamin D in your diet
- Smoking or tobacco use
- Alcohol abuse
- Not getting enough exercise

Finally, there are risk factors that are worth discussing with your doctor. These include surgical menopause (removing the ovaries before the age of 45) and long-term use of corticosteroids, medicines often used to treat chronic conditions such as asthma or rheumatoid arthritis.

What can you do to prevent it?

Doing regular, weight bearing exercise and getting enough vitamin D and calcium are the best things you can do. It is also important to stop smoking and avoid drinking too much alcohol.

Calcium:

Women under 50 and men under 70 should aim to get 1000 mg of calcium a day.

Women older than 50 and men over 70 should get 1200 mg of calcium a day.

Good sources of calcium are dairy products, beans, dark leafy green vegetables and oranges.

If you don’t get enough calcium from your diet, your doctor may suggest a calcium supplement.

Vitamin D: You can get vitamin D from sunlight or food. Your skin makes vitamin D when it is exposed to the sun, but this increases the risk of skin cancer. Additionally, many climates do not provide people with enough sunlight.

You can talk to your doctor about testing your vitamin D level. If your level is low, your doctor may suggest a vitamin D supplement.

Exercise: It is best to start when you are young and continue exercising throughout life. However, weight bearing and strength-training exercises help our bones at any age. This includes walking, jogging, climbing steps. Aim for 3-4 times a week for 30-40 minutes.

How do we test for osteoporosis?

If you have risk factors for osteoporosis or if you are a woman over the age of 65, a bone density scan is recommended. This is usually done with a dual energy X-ray absorptiometry (DEXA) test, which measures bone density in the hips, spine and wrist, areas commonly affected by osteoporosis.

You will get a standardized score called a T-score that is interpreted as either osteopenia (T-score between -1.0 and -2.5) or osteoporosis (T-score less than or equal to -2.5).

You can think of osteopenia as the process leading up to osteoporosis. If you have osteopenia, your doctor will talk to you about modifying your risk factors. If you are at high fracture risk, even osteopenia is sometimes treated with medications.

How can you treat osteoporosis?

Diet, exercise and quitting smoking are very important.

Additionally, your doctor may recommend one of several medications available to treat osteoporosis.

These include:

- Bisphosphonates: The first choice. Common types are alendronate (fosamax) or risedronate (actonel). They increase bone mass and decrease the risk of fractures. Side effects include irritation to the esophagus (the tube connecting the mouth to the stomach), but you can minimize this by taking them with water and not lying down immediately afterwards. IV forms available as well.
- Teriparatide: An alternative for patients with severe osteoporosis or those who do not tolerate bisphosphonates. Stimulates bone formation.
- Raloxifen: Affects how estrogen interacts with the bone. Also a breast cancer drug. May be used when there is also a need to manage breast cancer risk.

Surabhi Nirkhe is a third-year medical student at University of Washington School of Medicine. She is training with our team of medical providers at Cascade Medical as part of the WWAMI Regional Medical Education program.