

Osteoporosis

What is osteoporosis?

Some survivors may experience a side effect called osteoporosis. Osteoporosis is a condition that thins and weakens your bones and causes your bones to become very fragile. Osteoporosis is sometimes called a silent disease, because it can exist for years without symptoms. You may not realize you have osteoporosis until you break or fracture a bone.

Osteoporosis is a treatable condition. If you experience osteoporosis, it isn't because your health care team didn't do a good job treating your cancer. Your health care team's primary goal was to treat your cancer. Now, they can work with you to prevent or manage any late effects you might experience.

While it may seem frustrating at times to have to worry about health conditions after you have survived something like cancer, it's important to be aware of your risks for developing late effects like osteoporosis and watch for symptoms. This will increase your chances of early detection.

Who is at risk for osteoporosis?

There are many different risk factors for osteoporosis that are related to the type of cancer you had, your treatment or the way your body responded to treatment. There are also risk factors for osteoporosis that aren't related to cancer or treatment.

Survivors diagnosed and treated for any cancers that could spread to the bone are at risk, including those diagnosed with:

- Breast cancer
- Prostate cancer
- Multiple myeloma (cancer that happens in white blood cells that produce antibodies)
- Other solid tumors such as lung, testicular, ovarian and endometrial (uterine wall) cancers
- The treatment for some cancers, like breast cancer or prostate cancer, can include blocking or eliminating certain hormones in your body. Blocking the sex hormones helps kill the cancer cells. But these sex hormones also help protect the bones. If your body is deprived of these hormones, osteoporosis can happen. This does not mean that you shouldn't have received treatment that blocks your hormones because that may have been the best way to treat your cancer. Even if you received treatment that blocked your hormones, there are things you can do to prevent or minimize bone loss.

There are also some risk factors for osteoporosis that may affect survivors but aren't necessarily related to cancer or its treatment.

Some general risk factors for osteoporosis are:

- Health problems such as hyperthyroidism, rheumatoid arthritis or diabetes
- A history of breast cancer in your family
- Small body frame or low body weight
- Old age
- Being female – more likely to occur in women
- Ethnicity – Caucasians or Asians have a higher risk
- Low testosterone level in men
- Certain medications taken for long period of time
- Low intake of calcium and vitamin D
- Drinking too much caffeine
- Too little or too much exercise (i.e. bedridden, marathon runners)
- Smoking
- Drinking too much alcohol
- What are the symptoms and signs of osteoporosis?
- Some symptoms of osteoporosis may include:
 - Weight loss
 - Stooped posture
 - Curving of the upper back or Dowager's hump
 - Bone tenderness
 - Loss of one or two inches in height

If you experience these symptoms, it doesn't mean that you have osteoporosis.

Discussing your symptoms with your health care team can help you determine the cause of your symptoms.

Bone loss related to osteoporosis happens slowly over time. Sometimes, you may have osteoporosis and not experience any symptoms. If you think you are at risk for osteoporosis but don't have any symptoms, you might want to talk to your health care team about some of the tests that they can use to determine if osteoporosis is affecting you.

The most common and widely used test for osteoporosis is called the DEXA scan. This test measures the amount of calcium in bone, typically at the hip and lower spine. It is recommended for individuals over age 65 or menopausal women of any age who may be at risk for osteoporosis. The DEXA scan should be repeated every couple of years to check whether your bone density has changed. A T-score compares your results to healthy bones of young adults.

This chart shows what a T-score may look like:

Normal T-score	-1 to +1
Osteopenia (Low bone mass)	-1 to -2.5
Osteoporosis	-2.5 or lower
Severe osteoporosis	-2.5 or lower with one or more fractures

Blood and urine tests may also be used to see how much osteoporosis may be affecting your bones and how you are responding to any treatment for osteoporosis.

When does osteoporosis begin to affect survivors?

Osteoporosis usually happens after age 65 but may happen sooner if you received treatment that puts you at high risk for bone loss. The more risk factors you have the higher your chances of developing osteoporosis at some point during your life. Because osteoporosis can develop slowly, it may be difficult to determine exactly when it might affect you or when you might notice symptoms. You can discuss your risk for developing osteoporosis with your health care team at any time during your survivorship.

Is there a cure for osteoporosis?

There is no cure for osteoporosis. However, osteoporosis can be minimized and controlled. This means that once you know you have osteoporosis you can work with your health care team to develop ways to slow down your bone loss.

What can be done to minimize the risk of experiencing osteoporosis?

Here is a list of suggestions to help minimize your risk of osteoporosis:

- Stop smoking
- Drink little or no alcohol
- Include healthy behaviors into your lifestyle
- Maintain a healthy weight and improve your muscle strength and bone density by doing weight-bearing exercise, ideally thirty minutes a day, three or more days a week.
- Include more calcium in your diet -Calcium supplements are recommended to most women: 1000-1500 milligrams per day (but check with your doctor first to be sure your calcium level is not too high to begin with).
- Include more Vitamin D in your diet. Vitamin D supplements (not to exceed 400 I.U. daily) may be recommended if dietary intake is inadequate
- Evaluate your risk for falls and reduce your risks
- Talk with your doctor about medications that can help decrease bone loss
- Fosamax (alendronate sodium), Miacalcin (nasal calcitonin), or Slow Fluoride (a slow-release sodium fluoride) taken in combination with Citracal (calcium citrate), and SERMs such as tamoxifen (Nolvadex) or raloxifene (Evista), represent a range of pharmaceutical choices if you have osteoporosis. Consult your doctor about these options.

Measuring osteoporosis

At one time, treatment for critical bone loss began only after a fracture led to the diagnosis of osteoporosis. Now it is possible to diagnose osteopenia and osteoporosis and predict risk prior to fracture, using single- or dual-energy X-ray absorptiometry (DEXA) tests. This [X-ray scan](#) measures the bone density of your lumbar spine, because the spine is usually the first area to experience loss of bone mass. (A DEXA scan is different from a bone scan, which you may have had to check the health of your bones and to make sure there was no evidence of metastasis to the bone.)

You probably don't need a special scan to identify bone loss if you have lost height each year (a sign of significant osteoporosis). But if you have just recently experienced any type of menopause, you may not have lost significant height so far, and good medical practice suggests stepping in before you lose ground.

Preventing osteoporosis is particularly important when you have just experienced premature medical or surgical menopause. If you are trying to figure out what you should do, if anything, get a baseline DEXA scan to see how strong your bones are. If there is some evidence of early bone loss, getting two DEXA scans taken one year apart can tell you the rate at which you are losing bone mass.

Additional Resources

For more information about the DEXA scan technique and the location of a scanner near you, as well as general information on osteoporosis and the various medications used to treat it, call the National Osteoporosis Foundation's general information line, at 800-464-6700. The cost for a DEXA scan is \$125-\$350.

Works Cited

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