



## Stronger Bones During and After Cancer Treatment

Osteoporosis is a disease that causes bones to become thin and weak, often resulting in fractures (broken bones). Osteoporosis is a silent disease. You cannot see or feel your bones getting thinner. Keeping your bones strong is a lifelong process. The more you know about what you can do to keep your bones strong, the more likely you are to prevent osteoporosis.

Did you know that certain **types of cancer** increase the risk of osteoporosis?

Some of these include:

- Breast cancer
- Ovarian Cancer
- Prostate cancer
- Testicular cancer
- Multiple myeloma (a bone marrow cancer)
- Various metastatic cancers (cancers that have spread throughout the body)

**Certain medications** used to treat cancer can also increase the risk of osteoporosis.

These include:

- Aromatase inhibitors (such as Arimidex, Femara, Aromasin)
- Some chemotherapy medications
- Immunosuppressive medications (medications that slow or stop your immune system such as methotrexate)
- Androgen deprivation therapy (known as ADT, used as a hormone lowering medication)
- Steroid medications (such as prednisone, cortisone)

There are many **risk factors** for osteoporosis and the related fractures. Some of these include:

- Family history of osteoporosis or hip fracture
- Height loss of more than 1-1/2 inches or stooped posture
- Early menopause in women (age 45 or younger)
- Breaking a bone after age 50
- Taking medications that cause bone loss such as steroids; excess thyroid hormone replacement; the blood thinner coumadin and certain anti-convulsant (seizure) medications
- Certain medical conditions, such as rheumatoid arthritis or celiac disease
- Being underweight
- Eating a poor diet especially if it is low in calcium and/or vitamin D
- Getting too little physical activity
- Smoking
- Drinking too much alcohol

It is important to discuss your personal risk factors for osteoporosis with your healthcare provider. You cannot change some risk factors for osteoporosis but there are many steps you can take to keep your bones strong for life.

## Steps to Keep Your Bones Strong for Life

- **Eat a variety of healthy (nutrient-rich) foods every day.** Eat several servings of fruits and vegetables each day. The average person should eat 4 1/2 cups of fruits and vegetables every day.
- **If you are underweight.** Eat enough calories and protein to reach a healthy weight.
- **Get enough calcium.** Consume 1200 milligrams (mg) of calcium each day by eating 3 to 4 servings of foods rich in calcium such as low fat dairy foods (milk, yogurt, cheese), dark green leafy vegetables, canned fish eaten with bones (sardines, salmon), or calcium-fortified (with calcium added) foods. Add calcium supplements (pills) when you cannot get the calcium you need from food alone. For ideas of additional foods high in calcium, please visit: [www.nysopep.org](http://www.nysopep.org).
- **Get enough Vitamin D.** Vitamin D is naturally produced by the human body when exposed to sunlight. You can also get vitamin D from foods such as: milk, orange juice or soy milk with vitamin D, fatty fish including herring, catfish, salmon, mackerel, sardines and tuna. You should have about 1000 International Units (IU) of vitamin D each day. Food sources are limited in the amount of vitamin D they contain (a cup of milk has only 100 IU) so it is likely that you will need Vitamin D supplements to get enough vitamin D. Your healthcare provider may measure your vitamin D levels and recommend more than 1000 IU daily.
- **Be physically active.** Daily physical activity is important for strong bones and overall health. Try to be moderately active (such as walking) for 150 minutes per week or vigorously active (such as running) for 75 minutes per week. This can also be achieved by exercising for 10 minutes at a time and adding the minutes up to reach your goal. Walking is an easy way to strengthen your bones.
- **Limit alcohol.** Before drinking alcohol, it is important to speak to your healthcare provider about possible interactions with your medication or your medical condition. For healthy bones, the general population should limit alcohol to no more than 1 drink a day for women and 2 drinks a day for men.
- **Don't smoke.** If you do, STOP. Call 1-800-NYQUITS for information about how to quit.

**If you are living with cancer or have a history of cancer, here are a few facts to discuss with your healthcare provider/oncologist:**

- Osteoporosis is a silent disease. You cannot see or feel your bones getting thinner. A bone mineral density (BMD) test that measures your spine and hip is a quick, easy way to measure the density or thickness of your bones. Ask your healthcare provider when a BMD test is right for you.
- The results of a BMD test can tell you if you have normal bone mass, osteopenia (also called low bone mass, a condition that is a risk factor for osteoporosis and needs to be watched by your healthcare provider), or osteoporosis.
- Your BMD, along with your personal risk factors, can predict your chance of having a fracture and can help your healthcare provider decide if you need treatment.
- There are many medications available to stop bone loss and prevent fractures. Talk to your healthcare provider to find out more information about treatment options if you are at risk for osteoporosis, have osteoporosis, or have had a fracture.

For information about keeping your bones strong, visit the New York State Osteoporosis Prevention and Education Program (NYSOPEP) website at [www.nysopep.org](http://www.nysopep.org) or call the NYSOPEP office at Helen Hayes Hospital at 845-786-4772.