

Bone Loss and Breast Cancer Treatment for Women: Are You at Risk?



PMH



It Is Important to Know:

- Bone loss is a common long-term side effect of breast cancer treatment.
- Many breast cancer treatments are associated with bone loss and have an increased risk for breaking bones due to their weakness.
- It is important to keep your bones healthy during and after cancer treatment.

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What is Breast Cancer Treatment Induced Bone Loss?

- Some breast cancer treatments affect your bones by causing early menopause (premature ovarian suppression). This causes your body to lower its production of estrogen. Estrogen is important in keeping a balance between the body's natural activities of building and breaking down bone. A lower level of estrogen causes this balance to tip so that bone loss is higher than bone production and bones become weaker. This happens in women who have gone through natural menopause, but breast cancer treatment can cause bone loss to happen earlier and faster.
- The rate of bone loss for women who go through natural menopause is between 1% and 3% a year, and bone loss for women who go through early menopause caused by breast cancer treatment may be greater than 5% a year.
- Some breast cancer treatments also speed up normal bone loss in women who have previously gone through menopause.

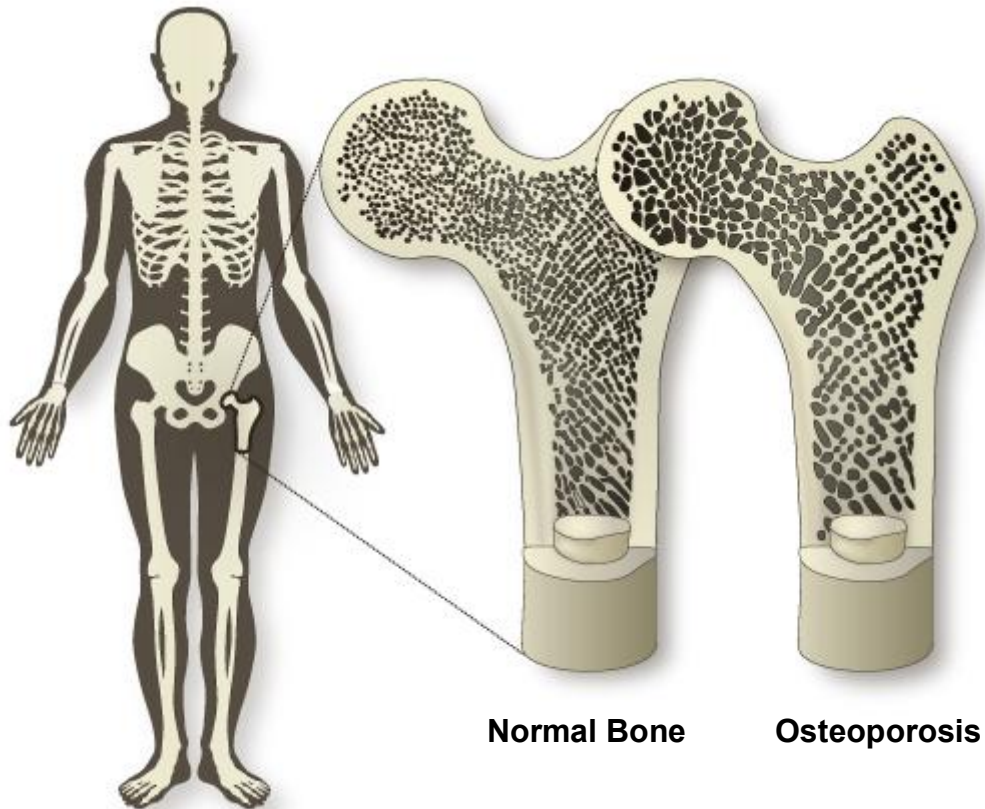
Which Breast Cancer Treatments Can Result in Bone Loss?

- Chemotherapy
- Hormone therapy
 - Tamoxifen can result in bone loss in women who have not yet gone through menopause.
 - Aromatase Inhibitors can result in bone loss in women who have gone through menopause and women who have not yet gone through menopause.
- Surgical removal of the ovaries can result in bone loss.

Each of these breast cancer treatments cause early menopause and/or lower levels of estrogen, resulting in increased rate of bone loss. This increased rate of bone loss is called “accelerated bone loss”, and it can increase the risk of osteoporosis and your chances of breaking your bones.

Speak to your doctor about your risk of accelerated bone loss.

What is Osteoporosis?



- Osteoporosis is a skeletal disorder in which lower bone mass and poor bone quality leads to lower bone strength – increasing the risk of breaking them.
- It is sometimes called the “silent thief” because it usually has no symptoms. But, as a woman loses bone mass and her bones become weaker, the risk of breaking bones goes up. In fact, some people do not know they have osteoporosis until they break a bone.
- Being aware of good bone health habits and making some important lifestyle changes can bring down the risk of breast cancer treatment-related accelerated osteoporosis by lowering bone loss by about 1-2% a year.

What You Can Do to Manage Bone Loss Caused By Breast Cancer Treatment

Having and keeping bones healthy is very important for all breast cancer survivors. Here are some suggestions to help you keep your bones healthy:



1. **Check to see how much Calcium and Vitamin D you are already getting from dietary sources** (the food and beverages that you eat/drink every day). If you are getting lower than the amounts listed below, take **Calcium** and **Vitamin D** to make sure that you get enough each day:

Calcium – 1,200-1,500mg/day

Vitamin D – 800-1,000 IU/day

Please see your doctor or a registered dietitian for help finding out if you should be taking Calcium and Vitamin D pills and if so, *how much* Calcium and Vitamin D you should be taking. Calcium is measured in Milligrams (mg) and Vitamin D is measured in International Units (IU). Bottles of Calcium and Vitamin D that you can buy in a pharmacy will have the amount of Milligrams or International Units contained in each pill listed on the label.

2. **Make Smart Food Choices.** Eat the right foods to provide your body with Calcium, Vitamin D, and other important bone-building nutrients. Here is a short list of foods and the amount of Calcium and Vitamin D that they contain. For more information, please see the resources listed at the end of this pamphlet.

Calcium:

- 1 cup of milk (skim, 1%, 2%) = 300mg of Calcium
- $\frac{3}{4}$ cup of plain yogurt = 295mg of Calcium
- $\frac{1}{2}$ cup of cottage cheese (1%, 2%) = 75mg of Calcium
- $\frac{3}{4}$ cup of cooked broccoli = 50mg of Calcium

Vitamin D:

- 1 cup of milk (skim, 1%, 2%) = 100 IU Vitamin D
- 75g of canned or cooked salmon = 600 IU Vitamin D
- 1 egg yolk = 20 IU Vitamin D

3. **Exercise.** Weight-bearing and strengthening /resistance activities are great for your bones as they increase bone strength. This includes:

- Walking
- Hiking
- Dancing
- Climbing stairs
- Weight lifting
- Playing tennis and
- Many other fun activities



Anything you do on your feet helps to strengthen your bones and slows down bone loss. Try 30 minutes of weight-bearing exercise 3-4 times per week.

If your risk for breaking your bones has been assessed as being high, you must ask your doctor if it is ok for you to:

- Run
- Skip
- Jump or
- Do other high impact exercises or activities

Talk to your doctor or your physiotherapist for more specific information and recommendations about exercise, activity, and bone loss.

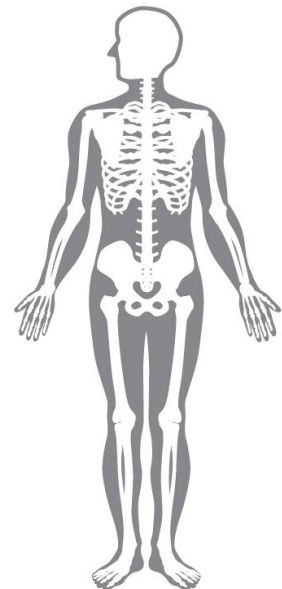
4. **Do not smoke.** Smoking is associated with bone loss in women who have gone through menopause. Quitting smoking can limit this loss.



5. **Limit the amount of alcohol and caffeine that you drink.** Too much alcohol (consistently more than 2 drinks per day) or caffeine (consistently more than 4 cups of coffee, tea, or cola per day) can lower bone mass and increase your risk of fractures.

6. **Talk to your doctor about your Bone Mineral Density (BMD).**

A bone mineral density test, and other aspects of your medical history, such as previous fracture after age 40 or risk of falling, age, and corticosteroid use, tell you if your bones have more risk of breaking. It is important to monitor the health of your bones during and after completing your breast cancer treatment. Remember, osteoporosis is the “silent thief!”



7. **Diet and exercise can lower, but not stop accelerated bone loss associated with cancer therapies.** Depending on the health of your bones and your rate of accelerated bone loss, you may need to take medications (like bisphosphonates, which are used to prevent or treat osteoporosis) to stabilize your bone mass and to stop further bone loss. Ask your doctor – he/she will tell you if

you need to take medication to stop further bone loss.

Key Points and Recommendations

- Bone loss is a common long-term side effect of breast cancer treatment.
- Bone loss caused by breast cancer treatment increases the risk of osteoporosis and related fractures.
- Make sure you are getting enough Calcium and Vitamin D in your diet.
- Talk to your doctor about getting a bone mineral density test. Depending on the results of the test and your treatment plan, annual bone mineral tests may be scheduled to monitor the health of your bones.
- You can keep your bones healthy!!

Resources:

Osteoporosis Canada

www.osteoporosis.ca

1-800-463-6842

Multidisciplinary Osteoporosis Program & Bone Densitometry

Women's College Hospital

www.womenscolleghospital.ca

www.womenshealthmatters.com

416-323-2663

Prevention and Rehabilitation of Osteoporosis

Toronto Rehabilitation Institute

www.torontorehab.com

416-597-3422 ext. 3622

Osteoporosis Clinic

Toronto General Hospital

www.uhn.on.ca

Telephone: 416-340-3890

Breastcancer.org

http://www.breastcancer.org/tips/bone_health/

Canadian Breast Cancer Foundation

www.cbcf.org

Dairy Farmers of Ontario

www.milk.org

Caring Voices – an online community for cancer survivors

www.caringvoices.ca

Willow Breast Cancer Support Canada – provides information and emotional support

www.willow.org

1-888-778-3100

Wellspring – a network of cancer support centres

www.wellspring.ca

1-877-499-9904

The material contained in this booklet is made available to you as a service to patients, families and visitors of Princess Margaret Hospital. It may not be a complete or up-to-date statement of medical knowledge in this area. Although we attempt to ensure the accuracy and currency of all material in this booklet, you should not act upon any of the information in this booklet without first consulting your doctor or other healthcare provider. There are many more resources about cancer available in:

- The Patient and Family Library at Princess Margaret Hospital (416) 946-4501 ext. 5383
- The national office of the Canadian Cancer Society at (416) 961-7223 and ccs@cancer.ca and at www.cancer.ca.