



# What Breast Cancer Survivors Need to Know About Osteoporosis

## National Institutes of Health Osteoporosis and Related Bone Diseases National Resource Center

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## The Impact of Breast Cancer

Other than skin cancer, breast cancer is the most common cancer in women. It can occur in both men and women, but it is very rare in men.

Although the exact cause is not known, the risk of developing breast cancer increases with age. The risk is particularly high in women age 60 and older. Because of their age, these women are already at increased risk for osteoporosis. Given the rising incidence of breast cancer and the improvement of long-term survival rates, bone health and fracture prevention have become important health issues among breast cancer survivors.

## Facts About Osteoporosis

Osteoporosis is a condition in which the bones become less dense and more likely to fracture. Fractures from osteoporosis can result in significant pain and disability. In the United States, more than 53 million people either already have osteoporosis or are at high risk due to low bone mass.

Risk factors for developing osteoporosis include:

- thinness or small frame
- family history of the disease
- being postmenopausal and particularly having had early menopause
- abnormal absence of menstrual periods (amenorrhea)
- prolonged use of certain medications, such as those used to treat lupus, asthma, thyroid deficiencies, and seizures
- low calcium intake
- lack of physical activity
- smoking
- excessive alcohol intake.

Osteoporosis often can be prevented. It is known as a silent disease because, if undetected, bone loss can progress for many years without symptoms until a fracture occurs.

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Osteoporosis has been called a childhood disease with old age consequences because building healthy bones in youth helps prevent osteoporosis and fractures later in life. However, it is never too late to adopt new habits for healthy bones.

## The Link Between Breast Cancer and Osteoporosis

Women who have had breast cancer treatment may be at increased risk for osteoporosis and fracture. Estrogen has a protective effect on bone, and reduced levels of the hormone trigger bone loss. Because of treatment medications or surgery, many breast cancer survivors experience a loss of ovarian function and, consequently, a drop in estrogen levels. Women who were premenopausal before their cancer treatment may go through menopause earlier than those who have not had breast cancer.

Results from the NIH-supported Women's Health Initiative Observational Study (WHI-OS) found an increase in fracture risk among breast cancer survivors.

## Osteoporosis Management Strategies

Several strategies can reduce one's risk for osteoporosis or lessen the effects of the disease in women who have already been diagnosed.

**Nutrition.** Some studies have found a link between diet and breast cancer. However, it is not yet clear which foods or supplements may play a role in reducing breast cancer risk. As far as bone health is concerned, a well-balanced diet rich in calcium and vitamin D is important. Good sources of calcium include low-fat dairy products; dark green, leafy vegetables; and calcium-fortified foods and beverages. Supplements can help ensure that the calcium requirement is met each day, especially in people with a proven milk allergy. The Institute of Medicine recommends a daily calcium intake of 1,000 mg (milligrams) for men and women up to age 50. Women over age 50 and men over age 70 should increase their intake to 1,200 mg daily.

Vitamin D plays an important role in calcium absorption and bone health. Food sources of vitamin D include egg yolks, saltwater fish, and liver. Many people, especially those who are older or housebound, may need vitamin D supplements to achieve the recommended intake of 600 to 800 IU (International Units) each day.

**Exercise.** Like muscle, bone is living tissue that responds to exercise by becoming stronger. The best activity for your bones is weight-bearing exercise that forces you to work against gravity. Some examples include walking, climbing stairs, weight training, and dancing. Regular exercise, such as walking, may help prevent bone loss and will provide many other health benefits. Recent research suggests that exercise also may reduce breast cancer risk in younger women.

**Healthy lifestyle.** Smoking is bad for bones as well as the heart and lungs. Women who smoke tend to go through menopause earlier, resulting in earlier reduction in levels of the bone-preserving hormone estrogen and triggering earlier bone loss. In addition, smokers may absorb less calcium from their diets. Some studies have found a slightly higher risk of breast cancer in women who drink alcohol, and evidence suggests that alcohol can have a negative effect on bone health. Those who drink heavily are more prone to bone loss and fracture, because of both poor nutrition and an increased risk of falling.

**Bone density test.** A bone mineral density (BMD) test measures bone density in various parts of the body. This safe and painless test can detect osteoporosis before a fracture occurs and can predict one's chances of fracturing in the future. The BMD test can help determine whether medication should be considered. A woman recovering from breast cancer should ask her doctor whether she might be a candidate for a bone density test.

**Medication.** There is no cure for osteoporosis. However, several medications are available to prevent and treat this disease. Bisphosphonates, a class of osteoporosis treatment medications, have demonstrated some success in their ability to treat breast cancers that have spread to bone.

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Another osteoporosis treatment medication, raloxifene, is a selective estrogen receptor modulator (SERM) that has been shown to reduce the risk of breast cancer in women with osteoporosis. The National Institutes of Health's Study of Tamoxifen and Raloxifene (STAR) found that raloxifene was as effective as tamoxifen in reducing the risk of postmenopausal breast cancer in high-risk women.

## Resources

For more information on osteoporosis, contact the:

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If you need more information about available resources in your language or another language, please visit our website or contact the NIH Osteoporosis and Related Bone Diseases ~ National Resource Center.

For more information on breast cancer, contact the:

**National Cancer Institute**

Website: [www.cancer.gov](http://www.cancer.gov)

## For Your Information

This publication contains information about medications used to treat the health condition discussed here. When this publication was developed, we included the most up-to-date (accurate) information available. Occasionally, new information on medication is released.

For updates and for any questions about any medications you are taking, please contact the Food and Drug Administration toll free at 888-INFO-FDA (463-6332) or visit its website at [www.fda.gov](http://www.fda.gov). For additional information on specific medications, visit [Drugs@FDA](mailto:Drugs@FDA) at [www.accessdata.fda.gov/scripts/cder/drugsatfda](http://www.accessdata.fda.gov/scripts/cder/drugsatfda). [Drugs@FDA](mailto:Drugs@FDA) is a searchable catalog of FDA-approved drug products.

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