

## How Strong is Your Bone Bank?

By Susan Locke, M.D.

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Osteoporosis is a condition where the bones become weak and brittle due to loss of bone density, making them more vulnerable to fracture. Bones are continually “remodeling” - new bone is being made and old bone is broken down or “resorbed.” New bone requires calcium, vitamin D, phosphorus and other minerals. Peak bone mass is achieved around age 30, after that, you lose slightly more bone than you gain. The higher the peak mass achieved, the more “savings” you have in the “bone bank.”

According to the National Osteoporosis Foundation, 44 million people in the US over the age of 50 have osteoporosis. Eighty percent of them are women. White women are at higher risk for osteoporosis than women of color. Other than race, other risk factors for osteoporosis include:

- Lifetime low intake of calcium and vitamin D
- Family history of osteoporosis
- Personal history of fractures after age 40
- Thin or small frame
- Estrogen deficiency after menopause
- History of amenorrhea
- History of an eating disorder
- Smoking
- Excessive alcohol
- Sedentary lifestyle
- Advanced age
- Certain medical conditions (hyperthyroidism, Crohn’s disease, hyperparathyroidism, Cushing’s Disease or rheumatoid arthritis)
- Malabsorption conditions
- Chronic use of certain medications including steroids and aromatase inhibitors.



To answer questions about osteoporosis, we asked **Holly Thacker, M.D., director of the Cleveland Clinic Center for Specialized Women’s Health** for her opinion about modifying your risk and treatment options.

Not all risk factors are modifiable, but here are some recommendations to promote bone health.

- “Build up your savings” – it is nearly impossible to get enough calcium and vitamin D by diet alone. Recommended daily dose of calcium is 1200-1500 mg/day in divided doses. The dose of vitamin D should be at least 1,000 IU/day, with more if there is little or no sun exposure.
- Perform weight-bearing exercises at least 3 times per week.
- Do not smoke. Do not drink alcohol excessively.

Dr. Thacker feels that women should be tested within two years of menopause with a bone density test, earlier for patients with a family history of osteoporosis, low vitamin D level, long time steroid medication use, history of unexplained bone fractures, skipped menses or who have taken treatments that lower their hormone levels.

The most common way to diagnose osteoporosis is by a specific type of X-ray called dual energy X-ray absorptiometry (DXA). This special X-ray takes a measurement of the density of bones in your hip, spine and wrist. It is a painless procedure, requiring no preparation. Usually two scores are generated. The T-score compares your density to the ideal number (that of a 30 year old) and then looks at the number of standard deviations from the ideal. The Z-score compares your bone density to that of someone of your own age and ethnic group.

If your bone density test shows that there is a low bone density (osteopenia) a FRAX test may be recommended. This test is a combination of your T-score and eight risk factors and helps determine the risk for fracture in the next 10 years. This test may help make a decision as to whether to start a medication for osteoporosis.

After the initial bone density test, repeat testing should be done in 2-3 years to be able to track the rate of change of bone loss. Dr. Thacker emphasizes that, whenever possible, the test should be done on the same machine.

For men, it is generally recommended that bone density screening be done at age 65 years old, unless other risk factors are present. Men should discuss with their physician whether screening is indicated for them before the age of 65.

Always consult your physician to discuss your individual risk factors for osteoporosis. If you would like to schedule an appointment with a women's health specialist or for an executive physical, please call us.

**If you would like information about the treatment of osteoporosis, please send an email to [help@healthnetworkfoundation.org](mailto:help@healthnetworkfoundation.org) and we will provide you with additional information.**



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Follow Dr. Locke on Healthnetwork's website. Her *Prescription for a Better Life* can be found through her link on our home page: [www.healthnetworkfoundation.org](http://www.healthnetworkfoundation.org).

Have a health question you want to ask Dr. Locke? Send an email to [help@healthnetworkfoundation.org](mailto:help@healthnetworkfoundation.org). All inquiries are kept private and confidential.

If you have questions or you would like a referral to one of our centers of excellence, please call: 866-968-2467 or 440-893-0830.