

Understanding Osteoporosis Tests

Postmenopausal osteoporosis is a disorder in which the strength of bone gradually decreases until the bone becomes more fragile and at higher risk for fractures. Getting older is a risk factor for this disorder, but other factors contributing to osteoporosis include family history, race, low body weight, smoking, and menopause, especially if it was premature (at or before age 40).

Testing bone strength

Bone density accounts for about 70% of bone strength. There are many tests to measure bone density. The preferred and most often used test is dual-energy x-ray absorptiometry – called DXA for short. It uses very low doses of radiation to measure the most common osteoporosis fracture sites, such as the spine and hip. It's quick (about 15 minutes) and painless, and you don't even have to undress. Usually your health insurance will cover the costs.

The DXA test can determine if you have osteoporosis now and, if so, how severe it is. It can also be used to help predict your future risk of developing osteoporosis and fractures. But remember that bone changes very slowly, so bone density tests do not need to be done too often. Every test should ideally be performed at the same place and on the same machine to make comparison between tests reliable.

What's a T-score?

Bone density test results are expressed as a T-score. Your T-score reflects how your bone density compares to a standard – the average value in women aged 20-30, the time of peak bone density. Each bone measured will have its own T-score. Remember that most older women will have a T-score below the standard.

- If your T-score is 0, then it's no different from the standard.
- If your T-score is above 0 (such as +0.5 or +1.0), your bone is more dense than the standard.
- With a T-score of -0.5, your bone density is approximately 5% below the standard.
- If your T-score is -1.0, then your bone density is about 10% below the standard.
(The bigger that negative number, the more below standard and the more porous your bone.)
- A T-score between -1.0 and -2.5 is called "low bone density" (sometimes called "osteopenia").
- A T-score of -2.5 or lower (25% or more below average) is called osteoporosis.

Understanding your T-scores

Discuss your T-scores with your healthcare provider. If your bone density test – alone or in combination with other bone health factors (such as being very thin) – indicate that you are at high risk for bone fractures, it's time for action. Good news! There are many changes women can make to improve their bone health – from adopting a healthy lifestyle, making weight-bearing exercise routine, getting enough calcium and vitamin D, to medication. You and your healthcare provider can devise a plan just for you.



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