Dear Alice,

How does a doctor take a bone density test?

Answer

Dear Reader,

Bone density is definitely a bona fide health concern! It’s directly related to the strength of your skeletal frame, which supports your entire body and allows you to move in addition to protecting your soft organs from injury. So, the lower the bone density, the more vulnerable you are to breaks and fractures (more on that later). Bone density tests are administered by health care professionals to determine an individual’s risk for fracture by using a dual energy X-ray absorptiometry (DXA). It’s the most reliable screening tool for bone health, and the World Health Organization’s (WHO) standard measurement for diagnosing osteoporosis, a disease characterized by extremely low bone density. But, don’t start fearing bone loss just yet. Read on for more on the skin and bones of bone density tests and keeping your bones healthy and strong!

First, a bit of background on why bone density matters and what it can tell you about your health. In combination with other factors such as the size and shape of your bones in relation to your body, how quickly your bone cells heal and regenerate, and how much wear-and-tear your bones have amassed in your lifetime? bone mineral density can be a reliable measurement of bone quality. The lower an individual’s bone mineral density, the weaker their bones are for bearing weight and physical stress. Low bone density also puts folks at risk for fragility fractures, which are ones that occur from a fall standing height or lower. Getting your bone density measured can give a more accurate fracture risk assessment. It can also determine how successful treatment is for those who have already been diagnosed with low bone density or osteoporosis.
Now, onto the test in question. Very little, if any, preparation is necessary for a patient in anticipation of the test. While DXA can measure the bone mineral density of any bone, the spine and hip are considered key sites of serious fractures and used for general measure. Typically performed in a hospital setting, a patient lays down while a mechanical arm scans the body while emitting low-dose x-rays (exposing them to significantly less radiation than a standard X-ray). The test is also very sensitive?it can detect as little as a one percent loss of bone density. The whole procedure takes between 10 to 30 minutes and is pain-free!

In order to help prevent fractures, bone density screening is generally recommended for females ages 65 and older as well as those who are post-menopausal and have additional risk factors for fracture such as:

- An individual or family history of fractures (especially of the hip)
- Low body weight (less than 127 pounds)
- Premature menopause [3]
- An autoimmune disorder (such as rheumatoid arthritis [4])
- Diseases or conditions that disrupt the body?s hormonal balance or ability to absorb nutrients (such as hypogonadism [5] or inflammatory bowel disease [6])
- Long-term therapies known to cause bone loss (such as corticosteroids, certain anti-seizure medications, or high-dose thyroid replacement drugs)
- Smoking or very high alcohol consumption

Adult males and children are not routinely screened for bone mineral density unless they have additional risk factors associated with fractures.

Results from the test are reported with a T-score and Z-score. T-scores represent how your bone density compares to the typical bone density of a healthy young adult of the same sex. It will help your health care provider determine your risk for osteoporosis. The Z-score represents how your bone density compares to folks who are the same sex, age, weight, and ethnic/racial background. It can help determine what factors, other than age, may contribute to any bone degeneration or loss. The National Institutes of Health [7] has even more information on the interpretation of the test results if you?d like to learn more.

In a discussion about bone density testing, the issue of prevention also bears mentioning. When it comes to minimizing bone density loss, addressing it early is critical. Adopting or altering the following behaviors can help keep bones healthy and strong well into your wiser years:

- In conjunction with strength training, integrating weight-bearing activities such as running, jogging, walking, or dancing [8] is also advised. These activities put mechanical pressure on your bones, strengthening them over time. But proceed carefully! Be sure to increase the intensity of your physical activity gradually to avoid stress fractures and other injuries.
- If you?re not getting the recommended daily allowance (RDA) of calcium, increase your calcium intake [9] with calcium-rich foods or calcium supplements to strengthen your bones and teeth. How much calcium you need [10] may vary (usually between 1,000 to 1,300 milligrams a day), so talking to a health care provider can help you find out what?s best for you.
- Ensure you?re getting enough vitamin D, which facilitates optimal calcium absorption. Eat foods rich in the nutrient, such as shitake or button mushrooms, vitamin D fortified
milk, certain types of fish (salmon, herring, sardines, tuna), and eggs. And, enjoy some sunshine (but don?t forget the sunscreen)!

- Smoking and alcohol consumption also contribute to bone loss. So, if you smoke, quitting [11] is advised and consuming alcohol in [12] or not at all can also help preserve bone density.
- Talk to your health care provider if you?re still concerned. If it?s appropriate, they can prescribe medications that can help slow or reverse bone loss. A registered dietician can also help you develop a comprehensive diet plan to maximize your bone health ? bone appétit!

Hope this helped you bone up on the ins and outs of bone density and testing!

Alice!

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