BAPTIST MD Anderson Cancer Center
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BMDA Bone Mineral Density Test
DXA Scan

A bone mineral density test is one of the most accurate ways of assessing your bone health. A bone mineral density test:

- Measures your bone loss over time
- Detects osteoporosis (a disorder of the bones that causes them to be weak and easily breakable) or the risk for developing osteoporosis
- Evaluates your risk for fractures
- Evaluates if treatment for osteoporosis is working

There are several different kinds of machines that can measure bone density. Some machines measure bone density in the hip and spine bone. Others measure bone density in the heel, wrist or finger. Baptist MD Anderson uses a special x-ray, called dual-energy x-ray absorptiometry (DXA). It measures bone density in the bones of the hip and spine and occasionally in the forearm. DXA is the most reliable test.

Test Preparation

These tests are easy and painless. No special preparation is required. You can eat or drink whatever you like before the test. If the test is done in the clinic or hospital, you may not need to change into a gown. However, you will need to remove any clothes with metal buttons or buckles or zippers.

Before the scan, tell your health care provider if you:

- Are pregnant or think you are pregnant. If x-rays are used, the radiation (even at low levels) may cause problems.
- Have recently had any radiologic tests that used an oral contrast dye (such as an abdominal CT or barium swallow). The contrast dye may interfere with the bone mineral density test. You will have to wait one week after those tests before you can have a DXA scan.

Test Administration

During the x-ray, you will lie on a cushioned table. A mechanical arm-like device will pass over your body and scan at specific bone regions. This device will not touch you. The radiation dose emitted from the x-ray is low (about the same radiation a person gets daily from the environment). The test usually takes 5 to 10 minutes to complete.

Test Results

The results of the test are reported using two numbers: T-scores and Z-scores. The T-score compares your bone density to that of an average adult with healthy bones. The Z-score compares your bone density to an average person of the same age. With either score, the more negative the number, the thinner the bones and the greater the risk of fracture.

The World Health Organization (WHO) uses the following standards for T-scores.

- Between +1 and -1 means your bone density is normal.
- Between -1.1 and -2.4 means osteopenia or low bone mass which may lead to osteoporosis.
- -2.5 and below means you have osteoporosis.

If your test results show that you have bone loss, you may be referred to your primary care doctor or a specialist. Endocrinologists and rheumatologists are doctors who are trained to evaluate and treat bone loss and osteoporosis. He or she can help you manage the disease.

Risks

Bone mineral density testing involves exposure to very low doses of radiation. Most experts feel that the risk of being tested is low when compared to its benefits.

Insurance Coverage

Not all health insurance plans cover the cost of the test. You will need to ask your insurance provider if coverage is provided.

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