

Dual Energy X-ray Absorptiometry

(Bone Mineral Density Testing; DEXA; DXA; Central DXA; Peripheral DXA)

Definition

Dual energy X-ray absorptiometry (DEXA) is a test that measures the density of your bones.

The DEXA scan is an x-ray scan that uses a small amount of radiation to take pictures of different bones. These pictures are used to measure the density of the bones at the spine, hip, and forearm. It can also take pictures of other bones such as a finger or the heel bone. Measurements of the spine and hip are called central DXA. Those done on the arms or legs are called peripheral DXA. In some cases, your doctor may order a whole body scan.

Reasons for Test

This test will help your doctor assess the density of your bones. It will help determine if you have osteoporosis, a bone-thinning disease. This information may be used to predict your risk of bone fractures.

Osteoporosis



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Possible Complications

An x-ray uses radiation to make images. The low levels of radiation from a single x-ray will not affect most people. If you are pregnant or think you may be pregnant, talk to your doctor before the x-ray. Radiation may be harmful to developing babies.

What to Expect Prior to Test

- Eat normally on the day of the test.
- Wait up to 2 weeks before having a DEXA scan if you have had a barium study or if you have been injected with contrast dye for a CT scan or MRI.
- Wear loose, comfortable clothing. Do not wear clothing with metal zippers, belts, or buttons.
- If there is any possibility that you are pregnant, let the staff know.

Description of Test

Central DXA

Central DXA measures bone density in the hip and spine. You will be asked to lie on a table. Your position will depend on the area being examined. You will be asked to hold still and may be asked to hold your breath while the X-ray is taken. The X-ray will be taken and sent to a computer monitor.

After the Test - You will be able to leave after the test is done.

How Long Will It Take? - About 10 minutes

Will It Hurt? - No

Results

The test results are usually available within a few days. Your test results will show 2 types of scores:

- T score—This number shows the amount of bone you have in comparison to a young adult of the same gender with peak bone mass. A score above -1 is considered normal. A score between -1 and -2.5 may mean you have osteopenia, the first stage of bone loss. A score below -2.5 means you may have osteoporosis.
- Z score—This number shows the amount of bone you have in comparison to other people of your age group, gender, and race. A score below -2 is considered abnormal.

These test results will help your doctor determine your risk for bone fractures. Your doctor will discuss the results with you.

Call Your Doctor

Call your doctor if you have any questions about your condition, the test, or your test results.

RESOURCES:

National Osteoporosis Foundation http://www.nof.org Ortho Info—American Academy of Orthopaedic Surgeons http://orthoinfo.aaos.org CANADIAN RESOURCES: Health Canada http://www.hc-sc.gc.ca Osteoporosis Canada http://www.osteoporosis.ca REFERENCES: American College of Radiology. Guideline for the Performance of Dual Energy X-ray Absorptiometry. Available at: http://www.acr.org/~/media/eb34da2f786d4f8e96a70b75ee035992.pdf. Updated 2014. Accessed February 18, 2016. Bone density scan. RadiologyInfo.org—Radiological Society of North America website. Available at: http://www.radiologyinfo.org/en/info.cfm?pg=dexa&bhcp=1. Updated February 12, 2015. Accessed February 18, 2016. National Osteoporosis Foundation. Clinician's Guide to Prevention and Treatment of Osteoporosis. Washington, DC: National Osteoporosis Foundation, 2010. Available at: http://www.nof.org/files/nof/public/content/file/344/upload/159.pdf. Accessed February 18, 2016. Osteoporosis: bone density tests. Am Acad Orthop Surg Bull. 1999;47(3). Osteoporosis. EBSCO DynaMed website. Available at: http://www.ebscohost.com/dynamed. Updated December 13, 2015. Accessed February 18, 2016.

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