



## Bone Densitometry Scan Information

### What is a Bone Densitometry Scan (DEXA)?

Bone Densitometry scanning, also called dual-energy x-ray absorptiometry (DXA or DEXA) or Bone Density Scan, is an enhanced form of x-ray technology that is used to measure bone loss. DEXA is today's established standard for measuring bone mineral densitometry (BMD).

An x-ray (radiograph) is a painless medical test that helps physicians diagnose and treat medical conditions. Radiography involves exposing a part of the body to a small dose of ionizing radiation to produce pictures of the inside of the body. X-rays are the oldest and most frequently used form of medical imaging.

DEXA is most often performed on the lower spine and hips.

### Common Uses

DEXA Bone Densitometry is most often used to diagnose osteoporosis, a condition that often affects women after menopause but may also be found in men. Osteoporosis involves a gradual loss of calcium, causing the bones to become thinner, more fragile and more likely to break. DEXA is also effective in tracking the effects of treatment for osteoporosis and other conditions that cause bone loss. The DEXA test can also assess an individual's risk for developing fractures.

### Bone Densitometry testing is strongly recommended if you:

- are a post-menopausal woman and not taking estrogen.
- have a personal or maternal history of hip fracture or smoking.
- are a post-menopausal woman who is tall (over 5 feet 7 inches) or thin (less than 125 pounds).
- are a man with clinical conditions associated with bone loss.
- use medications that are known to cause bone loss, including corticosteroids such as Prednisone, various anti-seizure medications such as Dilantin and certain barbiturates, or high-dose thyroid replacement drugs.
- have type 1 (formerly called juvenile or insulin-dependent) diabetes, liver disease, kidney disease or a family history of osteoporosis.
- have high bone turnover, which shows up in the form of excessive collagen in urine samples.
- have a thyroid condition, such as hyperthyroidism.
- have a parathyroid condition, such as hyperparathyroidism.
- have experienced a fracture after only mild trauma.
- have had x-ray evidence of vertebral fracture or other signs of osteoporosis.

The Lateral Vertebral Assessment (LVA), a low-dose x-ray examination of the spine to screen for vertebral fractures that is performed on the DEXA machine, may be recommended for older patients, especially if:

- they have lost more than an inch of height
- have unexplained back pain
- if a DEXA scan gives borderline readings

### Safety

Special care is taken during x-ray examinations to use the lowest radiation dose possible while producing the best images for evaluation. National and international radiology protection councils continually review and update the technique standards used by radiology professionals.

State-of-the-art x-ray systems have tightly controlled x-ray beams with significant filtration and dose control methods to minimize stray or scatter radiation. This ensures those parts of a patient's body not being imaged receive minimal radiation exposure.

## **Preparing for your Bone Densitometry Scan**

### **What should I expect BEFORE my Bone Densitometry Scan?**

#### **Food and drink**

On the day of your Bone Densitometry Scan you may eat normally. You should not take calcium supplements for at least 24 hours before your exam.

#### **What to wear**

You should wear loose, comfortable clothing, avoiding garments that have zippers, belts or buttons made of metal. You may be asked to remove some or all of your clothes and to wear a gown during the exam. You may also be asked to remove jewelry, eyeglasses and any metal objects or clothing that might interfere with the x-ray images.

#### **When to arrive**

Arrive 15 minutes before your scheduled appointment time to check in and fill out any necessary forms.

#### **Other information**

Inform your physician if you recently had a barium examination or have been injected with a contrast material for a computed tomography (CT) scan or radioisotope scan. You may have to wait 10 to 14 days before undergoing a DEXA test.

Women should always inform their physician or x-ray technologist if there is any possibility that they are pregnant. Many imaging tests are not performed during pregnancy because radiation can be harmful to the fetus. If an x-ray is necessary, precautions will be taken to minimize radiation exposure to the baby.

### **What will I experience DURING my Bone Densitometry Scan?**

#### **Scanning**

Bone Densitometry Scans are a quick and painless procedure, and usually done on an outpatient basis. In the DEXA examination, which measures Bone Density in the hip and spine, the patient lies on a padded table. An x-ray generator is located below the patient and an imaging device, or detector, is positioned above.

The detector is slowly passed over the area, generating images on a computer monitor. The patient must hold very still.

#### **Length of scan**

The DEXA Bone Densitometry Scan is usually completed within 10 to 20 minutes, depending on the parts of the body being examined.

### **What should I expect AFTER my Bone Densitometry Scan?**

You may resume normal activity after your Bone Densitometry Scan.

### **Bone Densitometry Scan Results**

All Bone Densitometry Scans are read by a radiologist specially trained in Bone Densitometry imaging and dedicated to the specific area of interest for your study.

Rapid results are essential not only for your peace of mind, but also for your physician to begin planning your treatment immediately, if necessary. After the scan has been read, the results are sent to your physician, who will discuss them with you.