



Bone Densitometry

How to prepare for your procedure

Bone densitometry is used to assess your bone health and fracture risk. Read this handout to learn about how this exam works, how to prepare for the exam, how the exam is performed, what to expect during the exam, and how to get your results.

What is bone densitometry?

Doctors use X-rays to view and assess bone fractures and other injuries of the musculoskeletal system. A plain X-ray, however, is not the best way to assess bone density.

To detect osteoporosis accurately, doctors use an enhanced form of X-ray called Dual-Energy X-ray Absorptiometry (DXA or DEXA). DEXA bone densitometry is today's standard for measuring bone mineral density (BMD). DEXA is a quick, painless exam for measuring bone loss.

The lower spine and hips are the most frequently measured sites. Mobile devices that measure the wrist, fingers or heel are sometimes used for screening.

How does the exam work?

The DEXA machine sends a thin, invisible beam of low-dose X-rays through your bones via two energy streams to measure bone density.

The amount of radiation used is small – less than one tenth the dose of a standard chest X-ray.

How should I prepare for the exam?

- Eat normally, but don't take calcium supplements for at least 24 hours before the exam.
- Wear loose, comfortable clothing without metal zippers, belts, or buttons.

- Tell your doctor if you have recently had a barium exam or have received a contrast material for a computed tomography (CT) or radioisotope scan; you may have to wait 10 to 14 days before having a DEXA test.
- Tell your doctor or X-ray technologist if there is any chance you may be pregnant.

How is the exam performed?

The DEXA exam takes between 10 and 30 minutes, depending on the equipment used and the parts of the body being examined.

1. You may be asked to undress and put on a gown.
2. You will then lie on a padded table with an X-ray source below and a sensor above.
3. Doctors tend to focus on bone loss in the spine and hip, where most osteoporosis-related fractures occur. During an exam of the spine, your legs will be supported on a padded box to flatten your pelvis and lower spine. To assess your hip, the technologist will place your foot in a brace that rotates the hip inward. In both cases, the sensor is slowly passed over the area, making pictures on a computer screen.
4. The peripheral DEXA (pDEXA) test is even simpler. You place your finger, hand, forearm or foot in a small device, and a bone density reading is obtained within a few minutes. These tests may not be as sensitive – especially in younger people – and cannot be used to assess response to treatment.

What will I feel during the exam?

DEXA bone densitometry is a simple, non-invasive exam. Once on the table, you may be asked to hold an awkward position for a short period of time, while the arm of the machine passes over your body to take measurements. You must stay as still as you can during the exam to ensure a clear, useful image. No anesthesia is required. The exam is painless, and radiation exposure is very low.

Who interprets the results and how do I get them?

A radiologist, trained to conduct and review DEXA exams, will interpret your results. The radiologist will send a report to your primary care doctor, who will work with you to create a treatment plan. The radiologist will not discuss the results with you.

Questions?

Call 206-598-6200

Your questions are important. Call your doctor or health care provider if you have questions or concerns. UWMC Clinic staff are also available to help at any time.

Imaging Services
206-598-6200

Usually ready within a few days, your test results will be in the form of two scores:

T Score

This number shows the amount of bone you have compared 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 is classified as osteopenia, the first stage of bone loss. A score below -2.5 is defined as osteoporosis. It is used to estimate your fracture risk.

Z Score

This number reflects the amount of bone you have compared to other people in your age group and of the same size and gender. If it is unusually high or low, it may show a need for further medical tests.

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