

DEXA Scan

Note: The information below is a general guide only. The arrangements, and the way tests are performed, may vary between different hospitals and doctors. Always follow the instructions given by your local hospital or doctor relating to any test or procedure.

A DEXA scan is used to measure the density of bones. It is mainly used to diagnose osteoporosis (loss of bone material) and to assess your risk of having a fracture.

What is a DEXA scan and what does it measure?

DEXA stands for 'dual energy x-ray absorptiometry'. It is a test that measures the density of bones. In general, the more dense the bone, the stronger it is, and the less likely it is to break.

How does a DEXA scan work?

A DEXA scan uses low energy x-rays. A machine sends x-rays from two different sources through the bone being tested. Bone blocks a certain amount of the x-rays. The more dense the bone is, the fewer x-rays get through to the detector. By using two different x-ray sources rather than one it greatly improves the accuracy in measuring the bone density.

The amount of x-rays that comes through the bone from each of the two x-ray sources is measured by a detector. This information is sent to a computer which calculates a score of the average density of the bone. A low score indicates that the bone is less dense than it should be, some material of the bone has been lost, and is more prone to fracture.

How is a DEXA scan done?

You lie on your back on a couch and are asked to keep still while an x-ray detector (the 'scanner') comes over the area to be tested. An x-ray machine fires x-rays towards the detector. The bones commonly scanned are the vertebrae (back bones), hip and wrist. (These are the bones that most commonly fracture due to osteoporosis.) The scan is painless and takes 10-15 minutes. You do not need to do any special preparation prior to a DEXA scan.

Who should have a DEXA scan?

A DEXA scan may be advised if you are at increased risk of osteoporosis. Osteoporosis usually causes no symptoms at first. However, if you have osteoporosis, you have an increased risk of breaking a bone. (See the leaflet on osteoporosis for more details.) If a DEXA scan shows that you have osteoporosis, then you may be given advice and treatment to help strengthen your bones. Therefore, a DEXA scan may be advised if you have:

- a fracture following a minor fall or injury.
- loss of height due to fracture of a vertebra (back bone).
- taken steroid tablets for three months or more.
- an early menopause (aged less than 45).
- a history of periods stopping (amenorrhoea) for more than one year before the menopause.
- other disorders associated with osteoporosis such as rheumatoid arthritis or coeliac disease.
- a family history of hip fracture on your mothers side.
- a body mass index of less than 19. (That is, if you are very underweight.)