

## Bone Mineral Density Scan (Bone Densitometry or DEXA Scan)

### Consumer Information

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### What is a Bone Mineral Density Scan?

A Bone Mineral Density (BMD) Scan is also called a DEXA scan (dual energy X-ray absorptiometry), or Bone Densitometry. It is a special type of X-ray test, which will measure the density (thickness) of your bones. The higher the density, the stronger the bone.

The BMD scan measures bone mineral content and will provide information as to whether you have lost some bone (osteoporosis) as well as information about your risk of having a fracture due to loss of bone. Osteoporosis is a major cause of fractures.

A BMD scan is usually taken of the spine and one hip. The forearm may also be scanned although less often. It assists your doctor in planning any prevention therapy or medical treatment.

### How do I prepare for a BMD Scan?

No preparation is required for this procedure. You do not need to fast and you may take all your medications as usual. There are no tunnels or confined spaces, no injections and the procedure is not painful.

It is helpful, but not essential, to wear loose fitting, comfortable clothing without metal buttons, buckles or zippers. Metal objects interfere with the X-rays and make the results inaccurate. A gown or sheet is usually provided if clothing needs to be removed.

### What happens during a BMD Scan?

On arrival for your BMD Scan your height and weight will be measured. This allows the computer to generate information about your bone density in comparison to general population statistics. It also assesses any height loss over time which also gives information about bone loss.

You will be asked to lie on your back on the scanning table or bed. A cushioned box will be placed under your knees to scan the spine. The boxed cushion enables the small of your back or lower spine to lie flat on the table and improves the accuracy and reproducibility of the test images. A frame will be placed between your feet to scan the hip. The frame is made up of a flat sheet of Perspex with a triangle at one end. The triangular end is placed between your feet so that the leg being scanned can be turned slightly inwards and the foot

is strapped to the triangle by a Velcro strap. The knee can also be held in place by a Velcro strap to keep the leg still. This also allows more accurate results that are reproducible in follow-up scans. Generally, neither of these is uncomfortable or painful.

### Are there any after effects of a BMD Scan?

There are no after effects of a BMD Scan.

### How long does a BMD take?

The duration of a BMD Scan varies between individual scanning machines and can range from 15 minutes to 30 minutes. The time varies because newer scanners are able to obtain information more quickly. Different manufacturers and slightly different techniques may add to, or subtract from, scanning time.

### What are the risks of a BMD Scan?

Generally, the risks of a BMD Scan with DEXA are very small. At the radiation dose levels that are used in diagnostic radiography there is little or no evidence of health effects (see [Radiation Risk of Medical Imaging in Adults and Children](#)).

It does involve a very small dose of radiation which makes this test unsuitable for women who are, or may be, pregnant.

If you have had spinal surgery, particularly with metallic implants, or hip surgery (hip replacements, screws or pins) you will need to inform the medical imaging technologist performing the scan who may decide to avoid that area.

Bone Mineral Density scans are best performed at least a week after having other radiological procedures or investigations such as barium meals or enemas, IVPs (intravenous pyelograms), CT scans or nuclear medicine studies. All forms of contrast medium or agents enhance the information obtained for that test. Since a BMD scan is an X-ray, these agents may be misread by the scanner as bone and falsely affect the result.

### What are the benefits of a BMD Scan?

A BMD Scan is currently the best test for assessing the skeleton for bone loss.

The amount of bone lost, compared to the young normal population (of the same sex and ethnic background), provides an estimate of your risk of fracture or broken bones in the future.

The result may guide the doctor in deciding on a course of treatment to prevent further bone loss or fracture.

If your bone density is found to be lower than normal and you receive medical treatment, a BMD scan can be performed at intervals as the medical

benefits scheme allows screening and review annually in some cases to check if the bone loss is improving or worsening in response to treatment or therapy. Bone mineral content can actually improve with treatment.

### Who does the BMD Scan?

You will be scanned by a [medical imaging technologist](#) skilled in Bone Mineral Density scans who will ensure you are positioned correctly and you are comfortable. In most instances the technologist will remain in the room with you for the duration of the scan.

The technologist will analyse the scan and a [radiologist](#) (specialist doctor), or another medical specialist trained in bone densitometry, will interpret the scan and provide a written report to your referring doctor.

### Where is a BMD Scan done?

Many BMD scanning machines are located within public or private hospitals where they may be situated within the radiology or endocrinology departments, or dedicated densitometry units. BMD scans may also be provided by private radiology practices. There is usually a room dedicated to the one scanning machine.

### When can I expect the results of my Bone Mineral Density Scan?

The time that it takes your doctor to receive a written report on the test or procedure you have had will vary, depending on:

- the urgency with which the result is needed
- the complexity of the examination
- whether more information is needed from your doctor before the examination can be interpreted by the radiologist

- whether you have had previous x-rays or other medical imaging that needs to be compared with this new test or procedure (this is commonly the case if you have a disease or condition that is being followed to assess your progress)
- how the report is conveyed from the practice or hospital to your doctor (in other words, email, fax or mail)

Please feel free to ask the private practice, clinic, or hospital where you are having your test or procedure when your doctor is likely to have the written report.

It is important that you discuss the results with the doctor who referred you, either in person or on the telephone, so that they can explain what the results mean for you.

#### Please note:

This information is of a general nature only and is not intended as a substitute for medical advice. It is designed to support, not replace, the relationship that exists between a patient and his/her doctor. It is recommended that any specific questions regarding your procedure be discussed with your family doctor or medical specialist

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