

**SALMANIYA MEDICAL  
COMPLEX**



**RADIOLOGY DEPARTMENT**

**HAVING A BONE MINERAL  
DENSITY MEASUREMENT  
FOR THE ASSESSMENT OF  
OSTEOPOROSIS  
THE DUAL ENERGY X-RAY  
ABSORPTIOMETRY (DEXA)  
SCANNING SERVICE IN  
SMC**

**Your Guide To The Procedure**

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Your doctor has requested that we should perform bone mineral density measurement on you. We hope this leaflet will answer some of the questions that you may have.

**WHAT IS A BONE MINERAL  
DENSITOMETRY?**

Bone Mineral Density (BMD) , is the single most important predictor of osteoporotic fractures. BMD accounts for 80% of an individual's fracture risk. It is better predictor of fracture than cholesterol is of myocardial infarction, or hypertension is of stroke.

**WHAT HAPPENS WHEN I  
ARRIVE AT X-RAY?**

When you arrive, report to the clerical officer at the reception desk, they will then inform the radiographers of your arrival. You will be shown to a cubicle and asked to undress, putting on a white gown and a dressing gown.

From here you will be taken into the scanner room and the examination will begin.

**WHAT HAPPENS DURING THE  
EXAMINATION AND WILL IT  
HURT?**

Bone densitometry is non-invasive measurement of BMD using X-ray, radionuclides, or ultrasound.

Dual energy X-ray absorptiometry (DEXA) is the most commonly used method, and is considered by many authorities to be the best. It utilizes two beams of X-ray to scan the area of interest.

This method is capable of spine, hip, and forearm. The precision for many of the areas measured is in the neighborhood of one to two percent. The effective radiation dose is 1 uSv (for comparison one chest X-ray gives a radiation dose of about 50 uSv).

### **Indication for DEXA:-**

The recommended the use of bone densitometry in both the diagnostic and interval monitoring of BMD in the following groups of patients:

1. Oestrogen deficiency particularly after early natural or surgical menopause, prolonged amenorrhoea, or where critical in decisions over hormone replacement therapy (HRT).
2. Vertebral deformity or osteopenia on X-rays suggesting osteoporosis.
3. Low trauma fractures.
4. Monitoring treatment.
5. Long term corticosteroid use.
6. Other forms of secondary osteoporosis (anorexia nervosa, alcohol abuse, hyperparathyroidism, thyrotoxic-osis, hypogondism, malabsorption syndrome, postgastrectomy and myeloma).

### **WHAT SITES SHOULD BE MEASURED?**

There are data to show that the combination of both AP spine and hip scans correctly diagnose most patients with low BMD. Twenty five percent of patients with low BMD will be missed if only one skeletal site is measured. Therefore two scans should be done where possible.

### **HOW LONG DOES IT TAKE?**

The examination usually takes approximately one a hours.

### **HOW WILL I GET THE RESULTS?**

Although the films taken during the procedure are checked before you leave the department, the Radiologist will need to study them closely before making any comments. Once the Radiologist has made his report, it will be typed and sent to X-ray office within one week.

CPR must be shown when receiving X-rays results.

### **LADIES:**

If there is any possibility that you may be pregnant please phone the radiology department before attending the X-ray department.

### **IF YOU HAVE ANY FURTHER QUESTION?**

The staff of the department would like your visit to be pleasant as possible. If you have any questions, please do not hesitate to ask us at any time before, during or after your examination.

*Address for any communications to: Radiology Department, SMC, PO Box 12, Manama, Bahrain. Tel. 17285538 or 17284005 17285262 – 17284084 (24 Hours). [www.health.gov.bh](http://www.health.gov.bh)*