

# Osteoporosis



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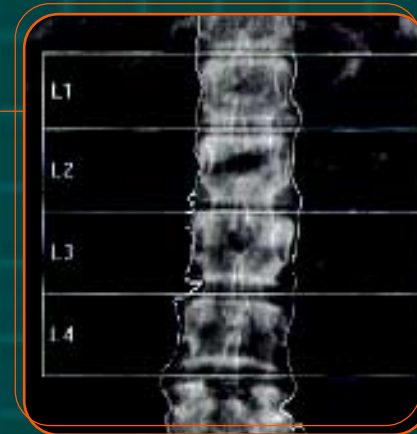
## Osteoporosis

Osteoporosis is a skeletal condition characterised by a reduction in bone mineral density (BMD) which leads to decreased mechanical strength and predisposes the skeleton to fracture. It is a common disease associated with aging and menopause, and affects both women and men. This condition often remains asymptomatic and undetected until bone fracture occurs. The earliest symptom is frequently acute back pain caused by a pathological vertebral compression fracture or hip pain caused by a hip fracture.



## Risk Factors

- Hypogonadal states (particularly menopause)
- Low calcium intake
- Vitamin D deficiency
- Physical inactivity or lack of weight-bearing exercise
- Cigarette smoking
- Family history
- Use of certain medications

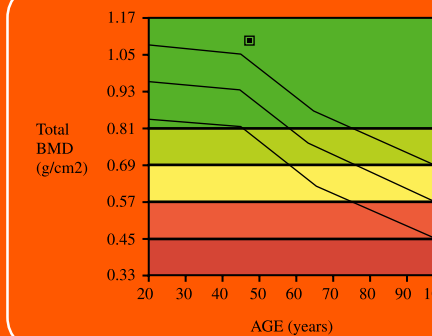


## Prevention and Treatment of Osteoporosis

A detailed clinical assessment, including bone densitometry and radiographic imaging, is able to determine the presence of osteoporosis and to institute early medical intervention. The aim of preventive strategies is to maintain optimal bone mass through diet, exercise or hormone replacement and avoidance of adverse influences such as smoking and certain medication. The choice of therapy must be a combination of medication, nutrition and exercise to optimise bone density and to minimise the risk of trauma.

## Diagnosis of Osteoporosis

The 2 major determinants of risk of osteoporosis are peak bone mass and bone loss, which are correlated by the BMD. The risk of fracture increases with decreasing BMD, which can be measured with a bone densitometer. Dual Energy X-ray Absorptiometry (DEXA) is the most commonly used technique today.



### ANCILLARY RESULTS

Region	BMD (g/cm <sup>2</sup> )	Young-Adult		Age-Matched	
		(%)	(T)	(%)	(Z)
Neck	1.090	121	+1.6	128	+2.0
Wards	0.954	108	+0.6	118	+1.1
Troch	0.853	114	+0.9	113	+0.9
Shaft	1.294	-	-	-	-
Total	1.100	118	-1.4	120	+1.5



The Hong Kong Baptist Hospital has installed the most advanced bone densitometer - the Expert-XL fan-beam densitometer.

It incorporates an ultra-high resolution array detector with spatial resolution 3 times better than other densitometers. It can measure spine and femur BMD in 6-12 seconds. Accurate patient positioning is facilitated by a fully motorized C-arm. The Expert-XL is also optimized for vertebral morphometry to quantify vertebral degeneration. Vertebral morphometry can be performed in less than 40 seconds. The Expert-XL fan-beam densitometer combines all the special features - high quality image, precision, speed, flexibility and reliability and is a new breakthrough in bone densitometry.

**Enquiries & Appointments: 2339 8982**

*Do not grieve, for the joy of the Lord is your strength.*

*Nehemiah 8:10*