

Lebanese Guidelines on Osteoporosis Assessment and Management



Ghada El Hajj-Fuleihan, Rafic Baddoura, Hassane Awada, Jad Okais, Paul Rizk and Michael Mc Clung. *Journal of Clinical Densitometry* 2005, in Press.

These guidelines are endorsed by the five Lebanese scientific societies: the Lebanese Society of Endocrinology, the Lebanese Society of Obstetrics and Gynecology, the Lebanese Society of Orthopedics, the Lebanese Society of Radiology, the Lebanese Society of Rheumatology and by the Eastern Mediterranean Regional Office of WHO.

These guidelines are meant to provide a structural framework to be used by the physician treating the patient at risk for or with osteoporosis. They are not meant to supersede the ultimate decision of the practicing physician.

A- Who to test?

Definite Indications

a- Post-menopausal women

- Regardless of age
 - There is evidence of radiological demineralization
 - Vertebral deformity or fragility fracture is present
 - Corticosteroid therapy for > 3 months is contemplated

- Age 65 years and above, regardless of clinical risk factors

b- Men

- Vertebral deformity or fragility fracture is present
- Chronic corticosteroid therapy
- Hypogonadism

Less Definite Indications

- Post-menopausal women less than 65 years of age, in the presence of at least one clinical risk factor
- Premenopausal women as well as in men, with medical conditions known to be associated with bone loss

No Indication

- In healthy premenopausal women
- In healthy men

Bone and Non-bone Related Risk Factors for Bone Loss and Fractures

a- Bone related risk factors

- White or Asian women (Genetic factors)
- Low BMD (T-score<-2.5). Extensive epidemiologic data demonstrate that there is a doubling of fracture risk for each standard deviation decrease in bone mass
- Maternal history of hip fracture
- Early menopause
- Prolonged amenorrhea
- Preexisting fracture
- Low trauma fracture since age 45
- Thin body habitus: BMI<20Kg/m²
- Chronic use of corticosteroids (>3 months)
- Medical conditions predisposing to osteoporosis
- High bone turnover
- Smoking, alcohol and physical inactivity

b- Non-bone related risk factors

- Old age
- Propensity to falls
- Medications: anxiolytics, sedatives
- Neurologic disorders leading to altered vision/proprioception

IOF web-site for the full text of the guidelines:

http://www.osteofound.org/health_professionals/guidelines/references.html#ref8

Referral to a specialist is strongly recommended in difficult and unusual cases.

B- What Measure to use?

Diagnostic Measurements:

- Central DXA Technology is the most established technology
- Measure spine and hip for all patients
- Use manufacturer validated Western reference curve for the Spine
- Use NHANES reference curve for the Hip

Follow-up Measurements:

- Same model, same device with strict Quality Assurance measures
- Recommended site: Spine, Hip if cannot use spine
- Recommended time between two measures, in patients on treatment: 1.5 to 2 years
- Significance of serial change over time is to be derived from center specific least significant change measure

C- When and How to treat?

Universal Measures

- Maintain a physically active lifestyle with adequate exposure to sunlight.
- Avoid smoking and high alcohol intakes.
- Maintain a total dietary calcium intake around 1.5 gm of elemental calcium in postmenopausal estrogen deficient women or men >65 years, as well as vitamin D intake of 600 to 800 IU/day, even under our latitudes. Provide calcium and vitamin D supplementation in the elderly.
- Avoid a low weight <60 kg in men or 50 kg in women or a low Body Mass Index BMI<20 kg/m².
- The prevention of osteoporosis begins with optimal bone mass acquisition during growth. Factors hindering bone mass acquisition, such as malnutrition and inadequate Calcium or Vitamin D intake, should be considered, identified and addressed during childhood.
- Address known factors that stimulate bone resorption or inhibit bone formation, including hypogonadism, primary hyperparathyroidism, hyperthyroidism and hypercortisolism.
- Develop fall prevention awareness and programs in the elderly. Hip protection and/or soft floor covering in elderly environment.

Pharmacological Interventions Recommended in High Risk Women

- BMD T-score< -2.5
- Prevalent fragility fractures, when further documented with low BMD
- Corticosteroid therapy 3 months with BMD T-score<-1.5

No clear evidence is available to demonstrate the efficacy of pharmacological intervention in postmenopausal women with -2.5< T-score<-1
No treatment is indicated if BMD T-score>-1, and in healthy premenopausal women.

Anti-fracture efficacy in the treatment of postmenopausal Osteoporosis

Grade of evidence	Spine	Non-vertebral	Hip
Calcium	A	B	B
Vitamin D	nd	B	B
Vitamin D + Calcium	nd	A	A
Physical exercise	nd	B	B
Hip protectors	nd	nd	A
HRT	A	A	A
Alendronate	A	A	A
Raloxifene	A	nd	nd
Risedronate	A	A	A
Calcitonin	A	B	B
Cyclic Etidronate	A	B	B
Calcitriol	A	A	nd
Tibolone	nd	nd	nd

A: evidence from RCT or meta-analysis

B: evidence from well designed quasi-experimental study

nd: not demonstrated