

For appointments at
Albany, Takapuna, Epsom,
Botany and Henderson
Ph: 09-623-2301
Fax: 09-623-2302
Healthlink: akldbone
Email: admin@bonedensity.co.nz
www.bonedensity.co.nz

NEWSLETTER

Winter 2012

AUCKLAND
Bonedensity
Managing Bone Health

Secondary causes of osteoporosis

Who, When and What to investigate?



1. The T-score indicates how the measurement relates to the young healthy adult, and thus progressively declines from midlife.
2. The Z-score indicates how the measurement relates to the same age group.
3. Bone is naturally lost at about 1%/year from midlife, but is faster in those who have a secondary cause as well.
4. A Z-score lower than -2.0 (i.e. 2 standard deviations or more below average for age) greatly increases the likelihood of a secondary cause.
5. Recommended investigations are then targeted toward hyperparathyroidism, hypogonadism especially in men, hyperthyroidism, Cushing's syndrome, coeliac disease, inflammatory disease and myeloma, if the patient is not on a medication known to accelerate bone loss such as aromatase inhibitors, anti-androgens and, of course, glucocorticoids such as prednisone.

Thus, our reports will estimate the absolute fracture risk calculated from the bone density and important clinical risk factors derived from a patient questionnaire administered by our technicians. However, it is the Z-score below -2.0 that most informs the possibility of a secondary cause of the osteoporosis and prompts our recommendation for further investigations.

Physicians

Assoc-Prof . Geoff Braatvedt
MD, FRACP

Assoc-Prof . Andrew Grey
MD, FRACP

Dr Brandon Orr-Walker
FRACP

Prof. Ian Reid
MD, FRACP

Dr Pat Frengley
FRACP, FACP

Prof. Ian Holdaway
MD, FRACP

Assoc-Prof. Warwick Bagg
MD, FRACP



Frequency of Bone Density Testing

- A. Dual Energy X-ray Absorptiometry (DXA) remains the gold standard means of measuring bone density and plays an important role therefore in the estimation of absolute fracture risk.
- B. Consider BMD (bone mineral density) testing at:
- age 65 for any postmenopausal woman
 - age 70-75 for any man
 - 5 years earlier if any clinical risk factor such as family history of fracture, low body weight, early menopause, smoking
 - any time if an adult sustains a fragility fracture
 - anytime for adults with illnesses or medications associated with increased fracture risk
- C. Repeat measurement recommendations
1. Over 60. Not on treatment:

Normals	Baseline hip T-score > -1.0 = 10 years intervals
Mild Bone Loss	Baseline hip T-score -1.5 to -2.5 = 3-5 year intervals

 - Apart from the early menopause, bone loss in older adults occurs on average at about 1%/year
 - However, some clinical circumstances mandate earlier reassessment e.g. a fragility fracture, new inflammatory disease, significant weight loss, glucocorticoids, aromatase inhibitor and anti androgen therapy or recent onset hypogonadism.
 - Absolute fracture risk assessment uses not only BMD but a range of simple clinical risk factors.
 2. On treatment:
 - 2-3 years after initiating therapy
 - provides evidence for discussion about adherence to therapy
 - 5-6 years after initiating therapy
 - assists decisions about temporary interruptions of therapy or dose reductions
- NB: When your patient attends for their bone density check our technicians administer a questionnaire (see www.bonedensity.co.nz) that identifies clinical risk factors for increased fracture risk and allows a more accurate assessment of absolute fracture risk.