

Guideline Effective Date: May 1, 2005

Bone Density Measurement (BMD) in Women

For full Guideline please go to website: <http://www.bcguidelines.ca>

Topic	Details																						
BMD Screening.....	BMD measurement is NOT RECOMMENDED as a screening procedure for women under age 65 or as part of a routine evaluation around menopause.																						
Indications for BMD measurement using DXA	<p>BMD measurement should only be performed when:</p> <ul style="list-style-type: none"> • Results are likely to alter patient care, and • Patients have at least one major or two minor risk factors for osteoporosis: <table border="1"> <thead> <tr> <th>Major Risk Factors</th> <th>Minor Risk Factors</th> </tr> </thead> <tbody> <tr> <td>• Age \geq 65 years</td> <td>• Past history of clinical hyperparathyroidism</td> </tr> <tr> <td>• Low trauma vertebral compression fracture</td> <td>• Chronic anticonvulsant therapy</td> </tr> <tr> <td>• Low trauma fracture > age 40 years</td> <td>• Low dietary calcium intake</td> </tr> <tr> <td>• Family history of osteoporotic fracture (esp. maternal hip)</td> <td>• Smoking</td> </tr> <tr> <td>• Current systemic glucocorticoid therapy > 3 mo. duration</td> <td>• Excessive alcohol intake</td> </tr> <tr> <td>• Malabsorption syndrome</td> <td>• Excessive coffee intake (> 4 cups/day)</td> </tr> <tr> <td>• Hypogonadism</td> <td>• Weight < 57 kg</td> </tr> <tr> <td>• Menopause < age 45 years</td> <td>• Chronic heparin therapy</td> </tr> <tr> <td>• Primary hyperparathyroidism</td> <td>• Rheumatoid arthritis</td> </tr> <tr> <td></td> <td>• Short-term weight loss > 10% from weight at age 25</td> </tr> </tbody> </table> <ul style="list-style-type: none"> • Irrespective of BMD results, lifestyle modification should be recommended (adequate calcium and vitamin D, avoidance of smoking and rapid weight loss, participation in regular weight-bearing exercise, falls avoidance). 	Major Risk Factors	Minor Risk Factors	• Age \geq 65 years	• Past history of clinical hyperparathyroidism	• Low trauma vertebral compression fracture	• Chronic anticonvulsant therapy	• Low trauma fracture > age 40 years	• Low dietary calcium intake	• Family history of osteoporotic fracture (esp. maternal hip)	• Smoking	• Current systemic glucocorticoid therapy > 3 mo. duration	• Excessive alcohol intake	• Malabsorption syndrome	• Excessive coffee intake (> 4 cups/day)	• Hypogonadism	• Weight < 57 kg	• Menopause < age 45 years	• Chronic heparin therapy	• Primary hyperparathyroidism	• Rheumatoid arthritis		• Short-term weight loss > 10% from weight at age 25
Major Risk Factors	Minor Risk Factors																						
• Age \geq 65 years	• Past history of clinical hyperparathyroidism																						
• Low trauma vertebral compression fracture	• Chronic anticonvulsant therapy																						
• Low trauma fracture > age 40 years	• Low dietary calcium intake																						
• Family history of osteoporotic fracture (esp. maternal hip)	• Smoking																						
• Current systemic glucocorticoid therapy > 3 mo. duration	• Excessive alcohol intake																						
• Malabsorption syndrome	• Excessive coffee intake (> 4 cups/day)																						
• Hypogonadism	• Weight < 57 kg																						
• Menopause < age 45 years	• Chronic heparin therapy																						
• Primary hyperparathyroidism	• Rheumatoid arthritis																						
	• Short-term weight loss > 10% from weight at age 25																						
Investigating low-trauma (“fragility”) fractures via BMD measurement	<p>There are two situations where patients can be assumed to have osteoporosis and BMD is not required to make the diagnosis; however, it may be useful to monitor the effects of treatment:</p> <ul style="list-style-type: none"> • Low-trauma fractures (due to an injury that would be insufficient to fracture normal bone). • Loss of \geq2 cm of height in one year or 5 cm over a lifetime (not resulting from other causes). 																						
Inappropriate indications for BMD measurement.....	<ul style="list-style-type: none"> • Chronic back pain (aiming to rule out vertebral fractures). • Kyphosis (best investigated using lateral thoracic spine x-rays to rule out anterior compression fractures). • Menopause, in the absence of risk factors. 																						
Follow-up BMD measurements using DXA	<p>Not required more frequently than q2years, except in patients:</p> <ul style="list-style-type: none"> • On \geq7.5 mg prednisone/day (or equivalent) x 3 months who require baseline and q6month DXA while on treatment. • With existing fractures or very low bone density where early DXA is indicated. 																						

NOTE: BMD measurement is generally performed using dual energy x-ray absorptiometry (acronym is DXA or DEXA).