Osteoporosis Risk Assessment, Diagnosis and Management

Recommendations for postmenopausal women and men aged >50 years



Treatment not recommended

Very High Risk Minimal Trauma Fracture Risk Factors with No Fracture Non-modifiable **Diseases / Conditions** Medications • T-score **≤ -3.0** Hip or Vertebral Other Site Early menopause Aged ≥ 70 years and Glucocorticoids Hypogonadism Parent with hip fracture \geq 4 months Recent fracture Coeliac disease Lifestyle (prednisone dose within 2 years Rheumatoid arthritis Falls/poor balance \geq 7.5mg/d) and/or Primary hyperparathyroidism DXA to establish **DXA BMD** Low physical activity/immobility Excess thyroid History of 2 or more Hyperthyroidism BMD recommended Low body weight hormone replacement fragility fractures Diabetes but not essential Low muscle mass • Chronic liver or moderate/severe kidney disease and/or Androgen deprivation Protein/calcium malnutrition Myeloma Clinical risk factors therapy Vitamin D insufficiency Organ/bone marrow transplant Corticosteroids Aromatase inhibitors Smoking/Alcohol > 2 std drinks/day HIV Low BMI T-score **≤ -1.5** T-score > **-1.5** Recurrent falls and/or FRAX result Use FRAX to check fracture risk o MOF* risk ≥ **30%**, or https://www.fraxplus.org/calculation-tool/ • Hip # risk ≥ **4.5%** Calculation tool on menu (Australia listed under Oceania Region) MOF* risk ≥ 10% refer for DXA **TREAT** Consider referral to **Investigate** bone specialist DXA BMD of spine and proximal femur for other Bisphosphonate (oral/IV) for bone-anabolic agent causes of Denosumab ie, romosozumab or fracture teriparatide as this may Hormonal therapy. T-score **≤ -2.5** Low bone density T-score between **-1.5** and **-2.5** be the most appropriate when appropriate treatment for this group **Check FRAX result TREAT** Reported on BMD report or use FRAX tool to calculate (input BMD result) https://www.fraxplus.org/calculation-tool/ Bisphosphonate (oral/IV) Calculation tool on menu (Australia listed under Oceania Region) Denosumab Hormonal therapy. when appropriate MOF^* risk \geq 20%, or Hip # risk \geq 3% Low risk of fracture

*MOF = Major Osteoporotic Fracture, eg hip, distal forearm, vertebral, humerus, pelvic

Standard Practice (for all outcomes)

- Implement falls prevention strategies
- Encourage weight-bearing and resistance exercise
- Modify diet, smoking, alcohol intake

Osteoporosis Management and Fracture Prevention

Recommendations restricted to postmenopausal women and men aged >50 years

Section	Recommendation (Recommendation Number with Evidence Grade)
Identifying patients to investigate for osteoporosis	All individuals over the age of 50 years who sustain a fracture following minimal trauma (such as a fall from standing height, or less) should be considered to have a presumptive diagnosis of osteoporosis. (Recommendation 1 A)
	Conduct a clinical risk factor assessment in post-menopausal women and men over the age of 50 years with one or more major risk factors for minimal trauma fracture to guide bone mineral density (BMD) measurement and prompt timely referral and/or drug treatment. (Recommendation 2 A)
	A presumptive diagnosis of osteoporosis can be made in a patient with a vertebral fracture or hip fracture in whom there is no history of significant trauma. Caution regarding diagnosis and treatment should be exercised if only a single mild vertebral deformity (height loss) is detected, especially in a patient under the age of 60 years. (Recommendation 3 B)
Case-finding	Those ≥ 50 years of age with a current or prior minimal trauma fracture (MTF) should be assessed and appropriately treated. (Recommendation 7 A)
	For those ≥ 50 years of age with lifestyle and non-modifiable risk factors (eg, parent with hip fracture) use FRAX® to calculate absolute fracture risk. When FRAX® risk for Major Osteoporotic Fracture (MOF) is ≥ 10%, refer for DXA. If < 10%, DXA not recommended. Re-stratify risk with FRAX® after DXA using BMD reading and treat when: BMD T-score ≤ -2.5, or BMD T-score between -1.5 and -2.5 and FRAX® risk for MOF ≥ 20% and/or hip fracture risk ≥3%. (Recommendation 9 C)
Calcium, Protein, Vitamin D	For frail and institutionalised older people: Calcium and vitamin D supplementation, together with adequate protein intake are recommended for fracture prevention. Optimisation of calcium and vitamin D should be the standard of care for this group of people. (Recommendation 12 B)
Exercise	Exercises recommended to reduce fracture risk: • muscle resistance (strength) training should be regular (at least twice a week), moderate-vigorous and progressive • weight-bearing impact exercises should be performed most days (at least 50 moderate impacts) and include moderate-to-high loads in a variety of movements in different directions • balance training activities should be challenging Limit prolonged sitting (sedentary behaviour). (Recommendation 17 B)
Medication related osteonecrosis of the jaw (MRONJ)	MRONJ is a rare complication of osteoporosis therapy and most patients will not be at increased risk of MRONJ. Consider patient risk of MRONJ prior to starting osteoporosis therapy and ensure high-risk patients receive dental review prior to therapy initiation. Given the long in vivo half-life of bisphosphonates, there is little benefit to their cessation prior to dental extraction. Invasive dental procedures in patients on denosumab should be performed just prior to the next 6-monthly injection as the in vivo effect on bone suppression will be waning. (Recommendation 45 C)

This guide is based on Osteoporosis management and fracture prevention in postmenopausal women and men over 50 years of age (February 2024). For the full list of evidence-based recommendations, explanation of grades, practice tips and background information, access the full guideline from Healthy Bones Australia healthybonesaustralia.org.au or The Royal Australian College of General Practitioners racgp.org.au

Information for patients	Information for general practitioners
Healthy Bones Australia healthybonesaustralia.org.au	Healthy Bones Australia healthybonesaustralia.org.au/health-care-professionals/
Know Your Bones knowyourbones.org.au	NPS MedicineWise nps.org.au
	Therapeutic guidelines tg.org.au