

key points

SELECTED BY

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While fractures at the spine, wrist and hip are regarded as classical osteoporotic fractures, all fragility fractures in the elderly should be considered as osteoporotic once pathological fracture (e.g. metastatic disease) has been excluded. Management of osteoporosis used to be centred around diagnostic thresholds based on bone mineral density (BMD) measured at the spine or hip by DXA. However, the presence of several of the risk factors used to trigger a BMD test is associated with a fracture risk greater than can be accounted for by BMD alone. Thus, assessment of fracture risk should also take account of specific risk factors in addition to BMD.

The WHO has produced FRAX, a well validated tool that estimates the probability of a major osteoporotic fracture in the next 10 years. The algorithm, specifically designed for primary care, incorporates BMD as an additional, measurable risk factor along with information gleaned from clinical risk factors. A history of prior low trauma fracture in adult life is an important risk factor to identify. More than two-thirds of vertebral fractures are relatively asymptomatic but may be suspected from height loss and kyphosis. After age and prior fragility fracture, BMD is the next major determinant of fracture risk. Rather than scanning all individuals with a risk factor, measurements should be targeted to those individuals whose probability of fracture lies close to the interventional threshold where knowledge of BMD will influence management.

Individuals with a low trauma vertebral fracture or low BMD for age should be investigated for underlying causes of osteoporosis. Secondary causes account for up to 40% of cases of osteoporosis in women and 60% in men.

The goal of osteoporosis management is to reduce the future risk of fracture. Lifestyle modification includes measures to reduce falls risk and bone loss such as exercise, adequate dietary calcium and avoidance of smoking and excessive alcohol consumption. Patients with vertebral fractures may need long-term analgesia because of secondary degenerative disease. As most non-vertebral fragility fractures are caused by a fall, it is important that all patients with an osteoporotic fracture and those deemed to be at high risk of fracture are assessed for falls risk. International guidelines recommend asking older people annually about falls and carrying out a simple assessment of gait/balance to direct subsequent specialist falls assessment and address risk factors.

Combined therapy, with calcium and vitamin D, has been shown to reduce hip fracture risk in the frail elderly and should be considered in all older patients who are housebound or in residential care. Alendronate and risedronate are available as once-weekly preparations with evidence for significant reductions in vertebral and non-vertebral fractures. Denosumab is approved for osteoporosis in postmenopausal women at increased risk of fractures. Strontium ranelate has been shown to reduce fracture risk significantly in postmenopausal women.