

**In postmenopausal women with multiple vertebral fractures:**

- A**
- To reduce fracture risk at all sites treat with oral risedronate (5mg daily or 35mg once weekly + calcium ± vitamin D)
  - To reduce vertebral fracture risk treat with intermittent cyclical etidronate (400mg daily for 14 days + 500mg calcium daily for 76 days, repeating 3 monthly cyclical therapy)

**In postmenopausal women with osteoporosis determined by axial DXA and with a history of at least one vertebral fracture:**

- A**
- To reduce fracture risk at all sites treat with oral alendronate (10mg daily or 70mg once weekly + calcium ± vitamin D)
  - To reduce vertebral fracture risk treat with oral raloxifene (60mg daily + calcium ± vitamin D)

- B**
- To reduce vertebral fracture risk treat with intranasal calcitonin (200IU daily + calcium ± vitamin D)

**In postmenopausal women with osteoporosis determined by axial DXA with or without previous non-vertebral fracture:**

- A**
- To reduce fracture risk at all sites treat with either oral alendronate (10mg daily or 70mg once weekly + calcium ± vitamin D) or oral risedronate (5mg daily or 35mg once weekly + calcium ± vitamin D)
  - To reduce vertebral fracture risk treat with oral raloxifene (60mg per day + calcium ± vitamin D)

**In frail, elderly women (aged 80+ years) with a diagnosis of osteoporosis, with or without previous osteoporotic fractures:**

- A**
- To reduce fracture risk at all sites elderly women who have suffered multiple vertebral fractures or who have had osteoporosis confirmed by DXA scanning, should be considered for treatment with either oral risedronate (5mg daily or 35mg once weekly + calcium ± vitamin D) or oral alendronate (10mg daily or 70mg once weekly + calcium ± vitamin D)
  - To reduce hip fracture risk, frail elderly women who are housebound should receive oral calcium (1000-1200mg daily + 800IU vitamin D)

**In men with a diagnosis of osteoporosis with or without previous osteoporotic fracture:**

- A**
- To reduce fracture risk at all sites, men with low BMD and/or a history of one or more vertebral fractures or one non-vertebral osteoporotic fracture should be treated with oral alendronate (10mg + 500mg calcium ± 400IU vitamin D daily)

NON-PHARMACOLOGICAL MANAGEMENT

- A**
- Postmenopausal women should aim for a dietary intake of 1000mg calcium per day

- B**
- High intensity strength training is recommended as part of a management strategy for osteoporosis
  - Low impact weight bearing exercise is recommended as part of a management strategy for osteoporosis
  - Ipriflavone should not be used as a sole therapy for fracture reduction in patients with osteoporosis

HORMONE REPLACEMENT THERAPY

- Use of HRT can be considered as a treatment option for osteoporosis but the risks and benefits should be discussed with each individual woman before starting treatment

The recommendations are graded **A B C D** to indicate the strength of the supporting evidence.

Good practice points  are provided where the guideline development group wishes to highlight specific aspects of accepted clinical practice.

This Quick Reference Guide provides a summary of the main recommendations in the SIGN guideline on the management of osteoporosis.

Details of the supporting evidence and the full guideline are available on the SIGN website This guideline was issued in 2003 and will be considered for review in 2007.

**SIGN Executive**  
**Royal College of Physicians**  
 9 Queen Street  
 Edinburgh EH2 1JQ  
[www.sign.ac.uk](http://www.sign.ac.uk)



**Management of osteoporosis**

RISK FACTORS FOR OSTEOPOROSIS

- Previous history of fracture
- Female sex
- Age >60 years
- Family history of osteoporosis
- Caucasian or Asian origin
- Early menopause
- Low Body Mass Index (BMI = kg/m<sup>2</sup>)
- Smoking
- Sedentary lifestyle
- Long term (≥3 months) corticosteroid use

DIAGNOSIS OF OSTEOPOROSIS

- B**
- Conventional radiographs should not be used for the diagnosis or exclusion of osteoporosis
  - When plain films are interpreted as "severe osteopenia" it is appropriate to suggest referral for a DXA scan (dual-energy X-ray absorptiometry)

- A**
- Bone Mineral Density (BMD) should normally be measured by DXA scanning performed on two sites, preferably AP spine and hip
  - Repeat measurements should only be performed if they influence treatment

- C**
- If DXA investigations are repeated, AP spine and total hip measurements should be used to follow response to treatment
  - Following a DXA scan of the hip, the annual hip fracture risk (or 10 year fracture risk) should be included in the DXA report
  - Where lateral spine scans acquired with fan-beam DXA are available, visual assessment should be used to assess prevalent vertebral fractures

- B**
- Evidence of existing vertebral deformity should be used to modify the hip fracture risk estimated from age, sex, and BMD

- A**
- Biochemical markers of bone turnover should have no role in the diagnosis of osteoporosis or in the selection of patients for BMD measurement

Management of osteoporosis

# Choosing Drug Therapy

IN MEN & WOMEN  
≥ 60yr + Fracture

Vertebral  
Fracture

Non-Vertebral  
Fracture

≥2 Vertebral  
Fracture

1 Vertebral  
Fracture

DXA not essential  
BUT EXCLUDE  
tumour/myeloma

DXA

DXA

Femoral Neck  
T-1 to -1.59  
or  
Lumbar Spine  
T-1 to -1.99

Femoral Neck  
T ≤ -1.6  
or  
Lumbar Spine  
T ≤ -2

Femoral Neck  
T-1 to -2.49  
or  
Lumbar Spine  
T-1 to -1.99

Femoral Neck  
T ≤ -2.5  
or  
Lumbar Spine  
T ≤ -2

Alendronate\* + Ca ± vit D  
Risedronate\* + Ca ± vit D  
Raloxifene\*\*♀ + Ca ± vit D  
Cyclical Etidronate\*\*  
Calcitonin\*\* + Ca ± vit D  
If none of the above,  
1-1.2g Ca + 800 IU vit D  
+ Optimise lifestyle (all)

If T ≤ -1.5  
Consider  
repeat DXA 5yr  
later; optimise  
Ca intake  
& lifestyle

Alendronate\* + Ca ± vit D  
Risedronate\* + Ca ± vit D  
Raloxifene\*\*♀ + Ca ± vit D  
If none of the above,  
1-1.2g Ca + 800 IU vit D  
+ Optimise lifestyle (all)

\* = Vertebral and Non-Vertebral Fracture Risk Reduction  
\*\* = Reduction in Vertebral Fracture Risk  
♀ = Suitable for women only