

Key recommendations: physical activity and exercise for osteoporosis

Strong

Build bone and muscle strength

Weight-bearing/impact exercise for bones

50 impacts per session

Frequency  
Most days

With osteoporosis  
Moderate impact



Lower impact



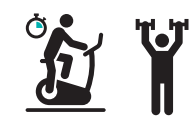
Low impact - weight bearing



Frequency  
Most days

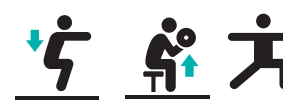
Build muscle

Weights & resistance bands



Frequency

2-3 days / week



3 sets, 8-12 reps of max weight

Progressive resistance training ↑



Sports and everyday activities



Vertebral or multiple fractures, or less able

Some extra caution  
Exercise up to lower impact  
Individualised advice  
Ensure safe technique



Steady

Improve balance

Activities like tai chi or dance



Frequency

2-3 days / week

Or a challenging balance class



Positive approach

Reassurance - 'how to' not 'don't do'

Benefits of exercise for osteoporosis



Keep active  
- something is better than nothing

● Build bone and muscle strength

● Improve balance

● Improve pain, posture and movements

Aiming for fewer fragility fractures and improved wellbeing

Straight

Improve pain, posture and movements

Manage pain from vertebral fractures

Daily back muscle strengthening exercises



Frequency

Daily

Improve posture and movements

Learn safe moving and lifting



Frequency

2-3 days / week

Use alternatives

Extreme or loaded flexion



Avoid

Inactivity and prolonged sitting



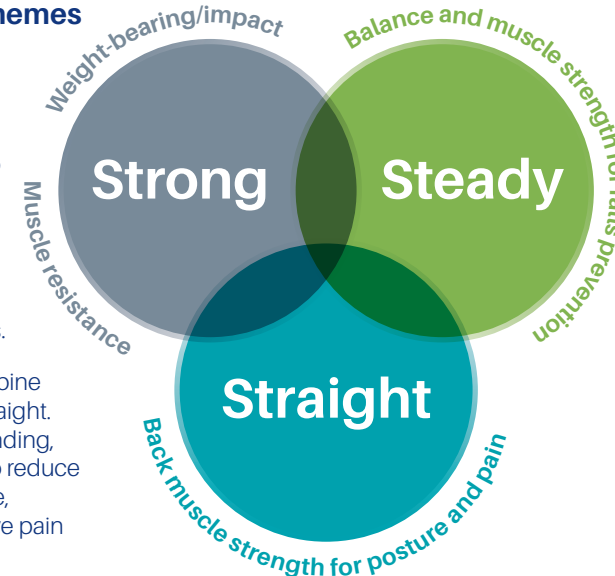
Strong, Steady and Straight: Physical Activity and Exercise for Osteoporosis  
Quick guide: summary (for use in conjunction with full Expert Consensus Statement)

The statement is structured around important themes for osteoporosis:

**STRONG** – the types and amount of exercise and physical activity needed to promote bone strength.

**STEADY** – the importance of including exercise and physical activity to reduce falls and resulting fractures.

**STRAIGHT** – a focus on 'spine care', keeping the back straight. A positive approach to bending, moving and lifting safely to reduce the risk of vertebral fracture, improve posture and relieve pain after vertebral fracture.



Key Principles

**Physical activity and exercise has an important role in the management of osteoporosis** – promoting bone strength, reducing falls risk and managing symptoms.

**People with osteoporosis should be encouraged to do more rather than less.** Adopt a positive and encouraging approach – 'how to' rather than 'don't do'.

**Physical activity and exercise is not associated with significant harm including vertebral fracture** – though some caution is advised, the benefits of physical activity and exercise outweigh the risks.

**Professionals should avoid restricting physical activity and exercise unnecessarily according to bone mineral density (BMD).**

**People with painful vertebral fractures need clear and prompt guidance** on how to adapt movements involved in day-to-day living, and exercises for posture and pain.

Strong – for bone strength

Weight-bearing/impact exercise

- Most days of the week; build up to 50 moderate impacts (i.e. low level jumping, jogging, dancing, hopping).
- If frail, less mobile or has vertebral or multiple low trauma fractures – up to 20 minutes of lower impact activity (e.g. walking).
- Avoid sitting for long periods.

Muscle strengthening (with increasing resistance)

- On 2-3 days a week - activities or exercise to feel a push or pull on the muscles (explain mild discomfort afterwards is normal). For maximum benefit, depending on fitness levels, recommend increasing the intensity of exercise to work muscles harder using weights or resistance bands. Build up to 3 sets of exercises with 8-12 repetitions of the maximum weight that can be lifted safely.
- Exercises to strengthen back muscles will promote bone strength in the spine.

Steady – to reduce falls

- If unsteady, over 65 and not taking regular exercise – do some challenging balance exercises 2-3 days a week.
- If repeated faller consider referral to falls service/physiotherapist.
- Posture training and back exercises to improve kyphosis may reduce falls risk.

Straight – a 'spine caring' approach

- Correct techniques for moving and lifting including the 'hip hinge'.
- On 2-3 days a week – exercises to strengthen back muscles to help with posture with a focus on endurance by exercising at low intensity - up to 10 repetitions, held for 3-5 seconds. Daily exercises to relieve back pain.
- Consider physiotherapy referral for painful fractures or mobility problems.

**SAFETY – Adopt a positive encouraging approach** – explain that fractures are rarely caused by exercise and the benefits outweigh the risks.

With osteoporosis

- Recommend correct techniques when using weights or resistance bands, gym equipment – get specialist advice if unsure.
- Recommend modification of exercises that involve end range sustained repeated forward bending unless you are using the 'hip hinge'/are very experienced/have very good muscle tone and control.
- Always increase intensity gradually and tailor according to individual fitness and ability.

With vertebral or multiple low trauma fractures

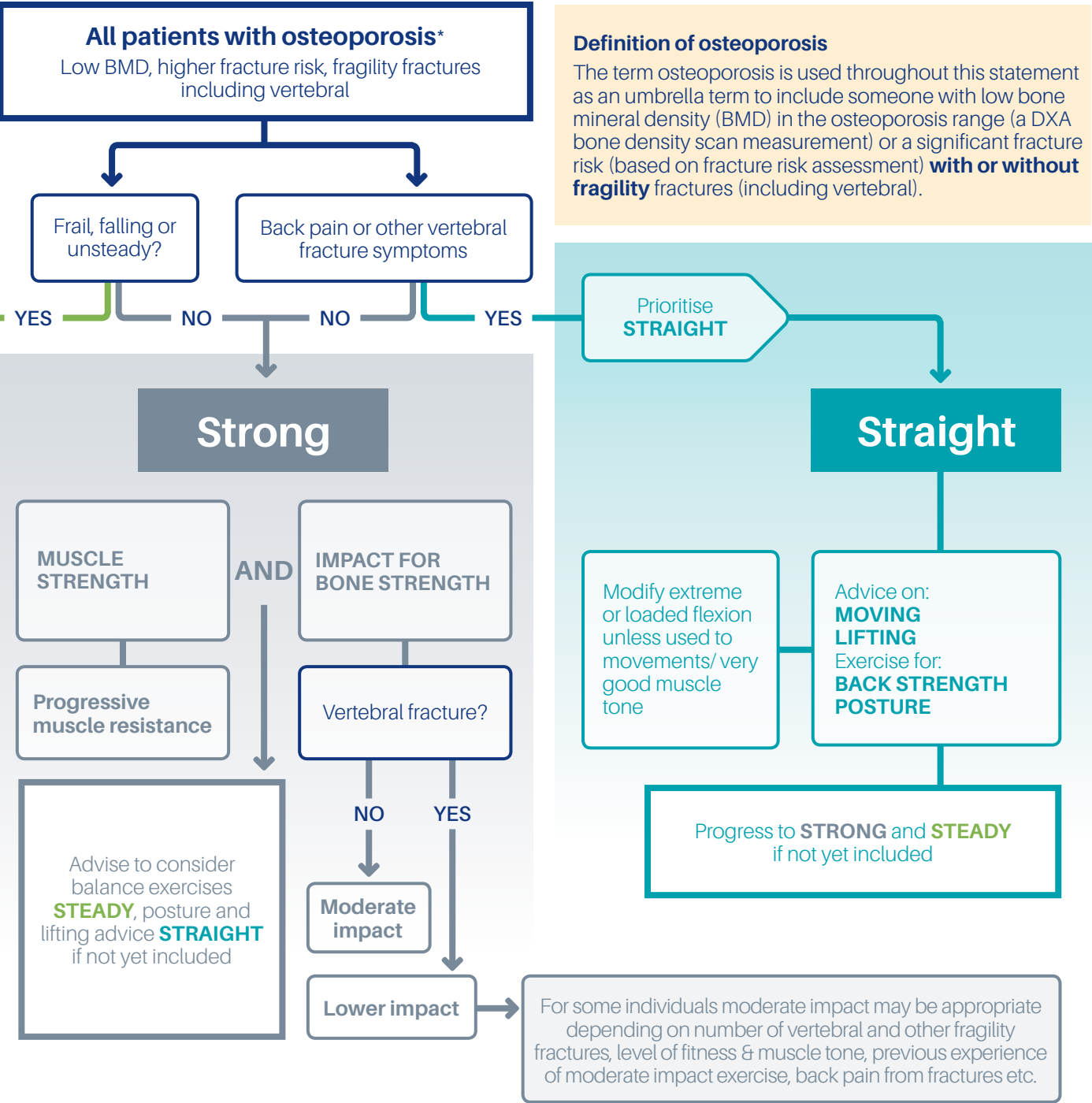
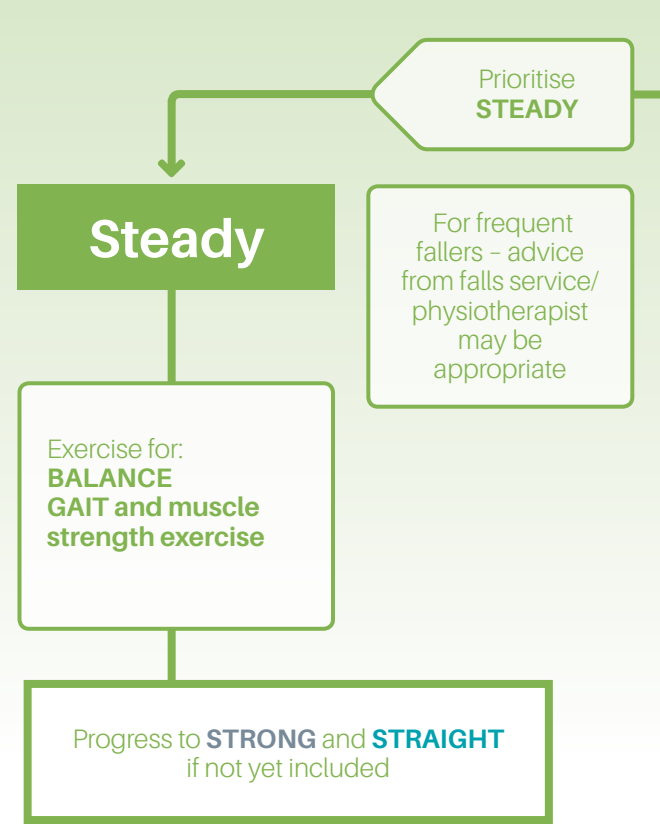
- Recommend lower impact rather than moderate impact exercise (jogging, low level jumping) as a general rule. May be appropriate to increase after individualised discussion.

With poor balance

- Recommend improving balance and muscle strength before increasing physical activity levels.

Quick guide:  
flow chart

Using the  
recommendations



Quick guide: exercise  
and activity details

