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 exercises and physical activity to reduce falls and resulting fractures

**Straight** - focus on ‘sine qua non’, keeping the back straight

A positive approach to bending, moving and lifting safely to reduce falls and resulting fractures.

**Vertebral or multiple fractures, or less able**

- Build bone and muscle strength
- Improve balance
- Manage pain
- Improve postural stability
- Improve muscle strength

**Key recommendations: physical activity and exercise for osteoporosis**

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

- **Weight-bearing/Impact exercise**
  - Frequency: Most days
- **Build muscle**
  - Frequency: Most days
- **Frequency**: 2-3 days/week

**Key Principles**

- Physical activity and exercise has an important role in the management of osteoporosis – promoting bone strength, reducing falls risk and managing pain.
- 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 prevent further involvement in day-to-day living, and exercises for postradicular pain.

**Safely**

- Adopts a positive encouraging approach – explain that fractures are rarely caused by exercise and the benefits outweigh the risks.
- With osteoporosis:
  - Recommend regular or high-impact exercise.
  - With vertebral or multiple low-trauma fractures:
    - Recommend moderate exercise such as swimming, walking.

- **Strong**
  - Frequency: 2-3 days/week
- **Steady**
  - Frequency: Most days
- **Straight**
  - Frequency: Daily

- **Build bone and muscle strength**
  - Frequency: Most days
- **Improve balance**
  - Frequency: Most days
- **Manage pain, postural stability, and improved wellbeing**
  - Frequency: Most days

- **Use alternatives**
  - Avoid excessive or forced bending
  - Avoid the use of resistance bands

- **Professional advice**
  - Avoid due to risk of injury

- **Manage pain from vertebral fractures**
  - Early back muscle strengthening exercises
  - Avoid severe or loaded exercise
  - Use alternatives
  - Avoid back pain

- **Correct techniques for moving and lifting**
  - Light loads
  - Use alternatives

- **Reduce to falls**
  - Frequent, over-56 and not taking regular exercise – do some challenging balance exercise 2-3 days a week.
  - If possible, consider referrals to falls services or physiotherapists.

- **Improve pain and back exercises to improve mobility**
  - Fatigue may reduce falls risk.

- **Vertebral or multiple fractures, or less able**
  - Build bone and muscle strength
  - Improve balance
  - Manage pain
  - Improve postural stability
  - Improve muscle strength

- **Aiming for fewer fragility fractures and improved wellbeing**
Using the recommendations

All patients with osteoporosis:
- Low BMI, higher fracture risk, fragility fractures including vertebral
- Moderate to high risk of hip fracture
- Osteoporosis confirmed by bone mineral density (BMD) scan

Definition of osteoporosis:
The term osteoporosis is used throughout this statement. It is defined as a bone mineral density (BMD) of the hip or spine 2.5 standard deviations below the young adult mean.

Steady
- For frequent falls – advice from falls service/physiotherapist may be appropriate
- Exercises for balance & muscle strength exercise

Progress to STRAIGHT if not yet included
- Low jumps
- Low impact
- Includes walking, tai chi

Strong
- For the less steady and over 65s
- Many activities under impact and muscle strengthening will help balance
- Tai chi, yoga

Weight-bearing impact
- Moderate
- Low jumps
- Stepping hopping
- Stepping hopping
- Lower
- Star standing/step
- Marching hopping walking
- Standing

Frequency and amount
- 2-3 days per week
- Build up to 3-5 sets of each exercise
- Physiotherapy – Most days, challenging balance programme – under guidance

Frequency and amount
- Back pain or other vertebral fracture symptoms
- Advice on: Sport, exercises, lifting advice
- Frail, falling or unsteady?
- All patients with osteoporosis* including vertebral fractures (including vertebral). Fragility fractures (based on fracture risk assessment) with or without osteoporosis

Definition of osteoporosis
- The term osteoporosis is used throughout this statement. It is defined as a bone density of the hip or spine 2.5 standard deviations below the young adult mean.
- The term osteoporosis is used throughout this statement as an umbrella term to include someone with low bone mineral density (BMD) or the osteoporosis range (a DXA bone density scan measurement) or a significant fracture risk (based on fracture risk assessment) with or without osteoporosis fractures (including vertebral).