

Therapist Advice and Education Notes:

General Information about osteoporosis

Information about bones

Bone is living tissue and constantly changing through life with bone cells laying down new tissue/ removing old tissue

The pace of remodelling changes: in children it takes about 2 years for skeleton to renew – in adults 7 to 10 years for skeleton to renew

After age 35 the bone re-sorption outpaces formation of new bone and loss of bone density occurs as part of the normal aging process. By age 75 about half the population will have osteoporosis as measured by bone density scan.

You cannot feel your bones thinning or getting weaker and osteoporosis itself is not painful or limiting. In fact you may not have noticeable signs of osteoporosis unless you break (fracture) a bone.

Because osteoporotic bones are thinner they are more fragile and susceptible to fracturing in response to minor bumps, stresses or falls. Fractures can be painful and limit mobility.

Because bone is a living tissue it responds to the forces applied to it by making new bone and growing stronger. This process happens through life.

Spinal Osteoporosis/ Fractures

Fractures in the spine are often called compression fractures as the vertebral body loses height. They occur most commonly in the thoracic and lumbar regions. Spinal compression fractures are associated with a loss of height and can result in a more rounded, flexed posture as the compressed spinal bodies most often lose height at the front and become wedge shaped, tipping the spine forward.

The experience of spinal osteoporosis and spinal fracture is quite variable. In many case fractures of the spine occur 'silently' without the person noticing. This is the case for around 70% of spinal fractures.

However fractures can cause pain and require pain relief. Acute pain from new fractures usually settles as the fracture heals (over 6-8 weeks). Many people recover well after spinal fractures but for some people more chronic pain or discomfort persists. For some pain can be severe and affect all aspects of life. Some experience loss of mobility and function following spinal fractures.

Unfortunately we know that if you have experienced one spinal fracture you are at high risk of having further spinal fractures. We also know the more fractures a person has the more likely this will affect their quality of life and be associated with pain, low mood, changes in body shape and reduced mobility and function.

It is never too early or too late to try to protect the bones in your spine. If you already have broken bones in the spine it is important to reduce chance of future fractures.

Lifestyle factors

There are many ways in which your lifestyle can help the health of your bones

Healthy eating

- Healthy balanced diet – from all main food groups, ensuring you get enough calcium
- Maintain healthy body weight – avoid excess weight loss which can be associated with increased risk of fracture

Exercise and Osteoporosis

Because bone is a living tissue it responds to the forces applied to it by growing stronger. Regular weight –bearing exercise (any exercise where you are supporting the weight of your own body) is particularly helpful in maintaining bone density.

Long periods of exercise are not necessary, we know that staying active and short periods of exercise are also effective for stimulating bone.

Having an active lifestyle and undertaking exercise can also help maintain muscle strength, balance and co-ordination and this can help your mobility and reduce your risk of falling and fractures due to falls.

If you have osteoporosis and have had a spinal fracture it is important to exercise safely as too much load on the spine can increase the risk of fractures. Choose low to moderate impact activities like walking, dancing or gardening or Tai Chi. Pace yourself; begin slowly and build up gradually. If exercises are painful or make you feel unwell, stop and see your GP.

Other things you can do

Current smokers more likely to fracture bones – stopping smoking can improve your bone health

Avoid excessive alcohol consumption – This is associated with bone loss and increases the risk of falls

Medication

If you have already experienced a fracture you may have been prescribed medication to reduce the risk of future fracture. Discuss with GP, Consultant.

Protect your spine

Think about protecting your spine during daily life. Activities that involve twisting, lifting or forward bending can put too much load on the spine and increase the risk of fracture. In particular:

- Avoid movements that require bending from the waist, especially bending forwards with straight legs and picking up something. These are activities like: toe-touches, sit ups with straight legs, picking up an object from the floor, putting a plug in a socket, lawn bowls. Instead bend at the hips and knees whilst keeping your back straight to pick up something or think about equipment such as a long handle grabber, or long handled tools in the garden to avoid bending.
- Lifting heavy objects is not advised with a diagnosis of osteoporosis. In particular avoid lifting overhead as this can place too much compression on the spine.
- Take care with movements that involve a lot of twisting the spine e.g.; full golf swing, tennis swing. It is best to move your feet and the rest of your body at the same time.
- Activities that combine bending, twisting and lifting at the same time are considered particularly high risk
- Protect your back when coughing or sneezing, if possible place your hand in the curve of your back, bend your knees slightly and avoid bending forward.

Falls prevention

Falls at home are common in older people and increase your risk of fracture. It can be useful to think about practical ways in which you can reduce the risk of falling.

Try to reduce any hazards around the home e.g.; loose rugs, trailing wires, slippery bathroom floors, poor lighting can all increase the risk of falling

Have your eyesight and hearing checked regularly as problems with your sight and hearing can increase the likelihood of falls.

Wear supportive, well-fitting shoes. Avoid walking in poorly fitting slippers, socks or tights that may increase your chance of slips and trips.

Use stair rails and walking aids as needed and supportive good fitting shoes

If you use a number of medications and particularly if you use any tablets to help you sleep or make you feel drowsy discuss your medications with your GP

If you have any other condition which increases your risk of falls, are concerned about falling or have fallen recently it is worth discussing this with your GP.