

Introduction

Osteoporosis is a condition that weakens bones, making them fragile and more likely to break. It mainly affects older people but it can affect someone of any age. It is a fairly common condition and affects over three million people in the UK. It is more common in women as they lose bone material more rapidly than men. The hormone oestrogen helps to protect against bone loss therefore after the menopause when this hormone level drops, this can increase risk of osteoporosis. Other factors that may increase the risk of developing osteoporosis include:

- Inflammatory conditions, such as rheumatoid arthritis, Crohn's Disease and Chronic Pulmonary Disease (COPD)
- Conditions that affect the hormone-producing glands such as an overactive thyroid
- Family history of osteoporosis
- Long term use of certain medications that affect bone strength such as oral prednisolone
- Having a low BMI (body mass index)
- Malabsorption problems
- Not exercising regularly
- Heavy drinking and smoking
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Diagnosis

Patients at increased risk of osteoporosis may be asked questions to calculate the risk of developing this condition (FRAX score). If found to

be at risk, a DEXA (dual energy X-ray absorptiometry) scan can be arranged.

Prevention

The following may help or slow down bone loss:

Exercise: Regular weight bearing exercise stimulates bone strengthening cells. It also increases muscle tone and improves balance, which can protect against falls.

Diet: Healthy eating, including a diet rich in calcium and vitamin D is important for bone health. The recommended daily intake for calcium in adults over the age of 50 is at least 1000mcgs per day. Protein recommendation is 1g of protein per Kg of body weight. Some bread, dark green leafy vegetables are rich in calcium as well as dried apricots and figs.

Vitamin D can be found in salmon, mackerel and tuna fish. Ultraviolet rays in sunshine trigger the skin to make vitamin D.

Some people may require supplements which would be prescribed by a clinician.

Smoking and alcohol: Giving up smoking and reducing alcohol intake will help reduce the risk of osteoporosis. Chemicals from tobacco can enter the bloodstream and cause bone loss. Excess alcohol can also cause this.

Is treatment required for osteoporosis?

If osteoporosis has been diagnosed but there has been no fracture, a FRAX risk assessment will be calculated. This takes into account age, DEXA scan results and other risk factors. If this risk is low then lifestyle changes are recommended.

If osteoporosis and a fracture has occurred, treatment is usually recommended to prevent a further fracture. The drug Alendronic Acid one tablet once per week is usually suggested.

Medication for osteoporosis

Biphosphonates for example Alendronic Acid and Risedronate are the drugs most commonly used. These should be taken while sitting up and with plenty of water as they can cause irritation of the gullet. They should not be taken at the same time as food. A rare side effect can be jaw problems such as 'heaviness' of the jaw or numbness and swelling. This must be reported to a clinician immediately. It is worthwhile discussing these issues with your clinician before starting these medications and it is also a very good idea to see your Dentist also.

Calcium and vitamin D tablets will often be prescribed in addition to biphosphonates.

Other measures are also important such as lifestyle and prevention of falls. Assistance with lifestyle can be provided by the practice nurse. Referral to the occupational therapy department can be made to assess patients at home for fall prevention.

Side-effects: bisphosphonates can cause some side-effects. These commonly are – stomach pain and irritation of the foodpipe. A very rare but serious side-effect is osteonecrosis of the jaw so we would recommend discussing with your dentist if starting treatment.

References

<https://www.nhs.uk/conditions/osteoporosis>

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