

## **Patient Information Leaflet: Osteoporosis**

### **What is osteoporosis?**

Osteoporosis means “porous bones” or thinning of the bones so that they become more fragile and break more easily. Osteoporosis is not painful at an early stage and is often undiagnosed until a fracture occurs, commonly at the wrist, spine or hip. Bone is built up during childhood, adolescence and young adult life usually reaching maximum thickness in the early thirties. In later life bone slowly gets thinner, particularly in women after the menopause when the ovaries no longer produce estrogen. Before the menopause this hormone is important for bone health and protects the bones against thinning.

### **Is osteoporosis important?**

Osteoporosis has become more common as life expectancy has increased. 1 in 3 women and 1 in 12 men will develop osteoporosis and around 40% of women will suffer an osteoporotic fracture during their lifetime.

### **Risks for osteoporosis**

Apart from the menopause (particularly if this occurs earlier than usual) and natural ageing there are a number of factors that may increase bone loss and bone thinning. These include heavy smoking, excess alcohol intake, low body weight and a family history of osteoporosis. Some medical conditions may increase the risk - these include rheumatoid arthritis, an overactive thyroid, Crohn's disease, ulcerative colitis, coeliac disease, and serious liver or kidney disease. Certain drugs including steroids (prednisolone) and aromatase inhibitors (breast cancer treatments) may increase bone loss and may make the bones more likely to break. A previous fracture increases the chances of having another. Other factors that contribute to the risk of breaking a bone include reduced mobility or poor balance such that the chances of falling are increased.

### **How is osteoporosis diagnosed?**

The best test is a bone density scan (DXA scan). This is a very low dose Xray investigation that accurately measures the thickness of the bone in the hip and lumbar spine. It is simple and painless. Ordinary Xrays of the hip and spine may suggest that the bones are thin but are not accurate enough to diagnose osteoporosis. Other tests are available, for example heel ultrasound; this very simple test can give an indication of fracture risk but is not used to diagnose osteoporosis.

### **Can osteoporosis be treated?**

It is very encouraging that there are now several effective treatments for osteoporosis which may reduce the risk of fracture by as much as 50% within a few years.

**HRT** (hormone replacement therapy) may be used in younger postmenopausal women to protect bones, particularly if they are experiencing menopausal symptoms. There are various types and doses of HRT available and even small doses of oestrogen have been shown to be beneficial to bones.

**SERM** (selective estrogen receptor modulator) therapy works like an estrogen to protect bones without the same effects that HRT can have on the breast and womb.

Evista (raloxifene) is a SERM and does not increase the risk of breast cancer or cause bleeding.

**Bisphosphonates** act on the bone to reduce loss and further thinning. They are generally taken as a once weekly tablet. Fosamax (alendronate) and Actonel (risedronate) are examples of this type of treatment. An earlier version of bisphosphonate treatment is Didronel (etidronate) which is taken for fourteen days every three months. Bonviva (ibandronate) is a once monthly bisphosphonate that has recently become available.

**Calcium and vitamin D** supplements are usually taken with all these treatments. These supplements are sometimes used alone for bone protection, particularly in the elderly.

**Strontium** is a relatively new treatment that helps build up bones as well as preventing loss.

**Parathyroid injections** are occasionally used for women with severe osteoporosis who have failed to respond to other therapies.

There are various advantages and possible disadvantages with all these therapies; the appropriate type of treatment can be discussed with your doctor but there is usually something for everyone. Other new therapies for osteoporosis are currently being developed.

#### **Can osteoporosis be prevented?**

A healthy lifestyle is important for bones at any age. This includes not smoking and not exceeding the recommended alcohol intake – 14 units/week for women, 21 units for men. It is also important to take regular weight bearing exercise, for example walking, skipping or sports such as tennis or jogging. Swimming is less effective for bones although very good for the heart and muscles. A good calcium intake is important at all ages; for women after the menopause the basic daily requirement is at least 700mg (roughly the equivalent of a pint of milk – any sort). HRT can prevent bone loss and is particularly useful around the menopause when many women are having hot flushes and other troublesome symptoms. For women with an early menopause HRT is usually recommended until the average age of menopause around 50yrs in order to protect the bones.

#### **Useful addresses /websites:**

**The British Menopause Society** [www.thebms.org.uk](http://www.thebms.org.uk)

**NHS cancer Screening Programme** [www.cancerscreening.nhs.uk](http://www.cancerscreening.nhs.uk)

**Women's Health Concern** [www.womens-health-concern.org.uk](http://www.womens-health-concern.org.uk)

Advice line Tel 0845 1232319

**Menopause Matters** [www.menopausematters.co.uk](http://www.menopausematters.co.uk)