Osteoporosis
Are you at risk?

stop!
osteoporosis affects 1 in 3 women and 1 in 12 men over the age of 50

watch out!
a number of risk factors increase your risk of developing osteoporosis

take action!
find out about your risk of osteoporosis and what you can do to help protect your bone health

National Osteoporosis Society
Osteoporosis affects 1 in 3 women and 1 in 12 men over the age of 50. The skeleton becomes so porous that the simplest knock or fall can break a bone, particularly in the wrist, spine, and hip. But fractures are not an inevitable part of getting older and osteoporosis can now be largely prevented and treated.

What is osteoporosis?
Osteoporosis literally means porous bones. The bones in our skeleton are made of a thick outer shell and a strong inner mesh filled with collagen sponges, calcium salts and other minerals. The inside looks like honeycomb, with blood vessels and bone marrow in the spaces between bone. Osteoporosis occurs when these spaces between bone become bigger, making bones fragile and liable to break easily. Bone is also a constantly changing, Old bones are broken down by cells called osteoclasts and replaced by bone-building cells, called osteoblasts. This process of renewal is called bone turnover.

Who is at risk?
We are all potentially at risk of osteoporosis because the bone loss that occurs as we get older, particularly as we are living longer as a population.

For women:
- Menopause (before the age of 45)
- Early menopause (before the age of 45; especially if both ovaries are removed)
- Missing periods for six months or more following pregnancy or oestrogen replacement therapy

For men:
- Low levels of the male hormone, testosterone
- Heredity

Warning signs
If you have already broken a bone after a minor bump or fall you may already have osteoporosis. Other warning signs include height loss and kyphosis (curvature of the spine). If you have one of these warning signs you may want to discuss your risk of osteoporosis with your doctor.

Do I have osteoporosis?
To be sure of the osteoporosis, your doctor will perform some tests on your blood and urine. They may also perform some X-rays to see if your bones are too thin or too dense. You may need a bone density scan, called a DXA scan, which measures the density of bone and compares this to a normal range. This test is currently the most accurate and reliable means of assessing the strength of your bones and your risk of fracture. If it is a simple, painless procedure that uses very low doses of radiation, you will be asked to lie down on the machine for 10-15 minutes while the X-ray scans your body. Your doctor will then compare your results to the normal range.
Can I prevent osteoporosis?

Genes determine the potential height and strength of the skeleton but lifestyle factors can influence the amount of bone laid down in the bone 'bank' during critical growth years and how much density is maintained later in life.

During childhood, adolescence and early adulthood, when the skeleton is increasing in bone density, it is vitaly important to try to maximise peak bone mass. Making the most of bone mass will put your skeleton in a better position to withstand the natural bone loss that occurs later. If you are in your mid-thirties or older it is important to aim to maintain the strength of your bones.

Follow a ‘bone-friendly’ diet

Healthy bones need a well-balanced diet, incorporating minerals and vitamins from different food groups, including bread, potatoes, pasta and cereals; fruit and vegetables; milk and dairy products; meat, fish, eggs, pulses, nuts and seeds.

Calcium is especially important in the diet because it is the most abundant mineral in our bones and helps to give them strength and rigidity. The most readily available sources of calcium are milk and dairy products such as cheese and yoghurt. Don’t worry if you are watching your weight as low-fat varieties usually contain just as much calcium as their full-fat counterparts. If you do not like or are unable to eat dairy products, you should be able to get enough calcium from non-dairy sources but it might take a bit more planning. Non-dairy products such as green leafy vegetables, baked beans, tony fish and dried fruit all contain useful quantities of calcium. Be careful not to have too much animal protein, salt or caffeine because, in excessive quantities, these can reduce the body’s ability to absorb or retain calcium.

Please see NOS Diet and Bone Health booklet for further information.

Take regular, weight-bearing exercise

Like muscles and other parts of the body, bones suffer if they are not used. They need regular weight-bearing exercise, which puts force through the bone, stimulating growth and therefore strength.

Good bone-building exercises include running, skipping, aerobics, tennis and weight-training. Even a brisk walk can be of some benefit.

Try to exercise at least three times a week for a minimum of 20 minutes but most importantly choose exercise that you enjoy and stick to a regular routine. If you haven’t exercised for a while, start gently and check with your doctor if you have another health problem and are concerned about exercising.

Please see NOS Exercise and Bone Health booklet for further information.

What else can I do?

If you are a smoker - give up! Smoking has a toxic effect on bone in men and women. It can cause women to have an earlier menopause and may increase the risk of hip fracture in later life. Not smoking will benefit bone and general health.

Watch what you drink! Drinking too much alcohol is damaging to bone turnover. Limit alcohol intake to a maximum of 28 units per week for men and 21 units for women. One unit of alcohol is equivalent to a glass of wine, a measure of spirits, or half a pint of normal strength beer or cider. The good news is that a moderate intake of one or two glasses of red wine a day may have beneficial effects on the skeleton as well as the heart.

What about treatment?

The treatment of osteoporosis depends on a number of factors including age, sex, medical history and which bones are broken. Lost bone cannot be replaced but doctors can prescribe treatment aimed at strengthening existing bone to help prevent further bone loss and fracture. Treatments are available for post-menopausal women and for anyone taking corticosteroids tablets for at least six months. Treatments include:

- Bisphosphonates
- Non-hormonal drugs which help maintain bone density and reduce fracture rates
- Hormone replacement therapy (HRT)
- Oestrogen replacement for women at menopause, which help maintain bone density and reduce fracture rates for the duration of therapy
- Selective Estrogen Receptor Modulators (SERMs)
- Drugs which act in a similar way to oestrogen on the bone, helping to maintain bone density and reduce fracture rates specifically at the spine
- Testosterone therapy
- Testosterone replacement for men with low testosterone levels to help maintain bone density
- Calcium and vitamin D
- Supplements of calcium and vitamin D can be of benefit for older people to reduce the risk of hip fracture

Please see NOS Treatments booklet for further information.

How the National Osteoporosis Society can help you

We offer support to people with osteoporosis, their families and carers through a range of detailed information booklets, a national telephone helpline and a network of regional support groups. We also provide information and support to healthcare professionals. Please contact us for more information on osteoporosis and bone health.

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