Royal Cornwall Hospitals
NHS Trust

Healthy living for strong bones

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What is osteoporosis?

Bones are made up of a solid outer shell, and a mesh or lattice that fills the inside – not much different from the inside of a bee's hive or the inside of an Aero chocolate bar. This gives bones their strength without making them brittle. Osteoporosis (or its less severe form, osteopenia) is the thinning of this mesh within the bones, reducing its strength and creating more gaps inside. This makes bones more likely to break or crumble.

Healthy bone

Osteoporotic bone

Why is a balanced diet important?

It is important for everyone to eat a healthy and balanced diet, not just for the sake of your bones. Whilst getting enough calcium is important, your bones also need other nutrients, vitamins and minerals for their health and function. Try to eat a variety of foods from vegetable, carbohydrate, meat and dairy groups (or their alternatives if you don't eat certain foods). Aim for a healthy bodyweight to help your bones – they grow stronger in response to weight and a little padding helps reduce the risk of bone injury should you take a tumble.

For information on food examples containing calcium or vitamin D, check the Royal Osteoporosis Society website's 'Nutrition for bones' section (theros.org.uk).

Calcium

Calcium makes up the majority of what's inside bones and teeth and is important for their strength. 99% of your body's total calcium is stored in your bones! A balanced diet should provide enough calcium for your body, but if you can't get enough, calcium supplements are also available.

How much calcium do I need?

Age	Daily RNI (Reference Nutrient Intake)
0-12 months (non breast feeding)	525mg
1-3 years	350mg
4-6 years	450mg
7-10 years	550mg
11-18 years boys/girls	1000/800mg
Adults (19+)	700mg
Pregnant women	700mg
Breast feeding women	1250mg

People taking osteoporosis treatment can benefit from a daily calcium intake of around 1000mg, and may be prescribed a calcium (and vitamin D) supplement alongside their medication.

Vitamin D

Vitamin D is responsible for aiding the body in absorbing calcium and phosphorus, which are needed for bone, teeth and muscle health. It also improves the health of your immune system, reduces inflammation and has other general health benefits. Vitamin D is made in the body from a series of reactions when your skin is exposed to sunlight, but it can also be found in certain foods. Around 20 minutes of safe sun exposure to bare skin is needed for your body to produce enough vitamin D for the day. Sunscreen, clothing, darker skin tones, or cloudy weather makes it harder for the skin to absorb the UVB rays used in making vitamin D.

During the winter months, or on days you don't get enough sun, you should aim to get your vitamin D from foods and/or supplements. When dieting or supplementing for vitamin D, aim for around 10micrograms (µg), also known as 400 international units (IU). Depending on your vitamin D levels, a health professional may recommend a stronger dosage.

Continued overleaf

Further information

For osteoporosis information and support contact the Royal Osteoporosis Society (ROS) helpline through telephone or website:

Freephone: 0808 800 0035
theros.org.uk

You can order an information pack or other ROS publications free of charge via telephone or email:

Tel: 01761 471771
Email: info@theros.org.uk

If you wish to donate to the society, or join as a member to receive a quarterly magazine, with useful information, tips, and current medical news, contact:

Tel: 01761 473287
Web: theros.org.uk

If you would like this leaflet in large print, braille, audio version or in another language, please contact the General Office on 01872 252690

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