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When to start worrying about your bones and osteoporosis

You may think they're solid, but your bones are constantly changing. The earlier you start taking action to support your bone health to prevent osteoporosis, the better.

Bone – the body's pH buffer

The body is constantly working to make sure your blood is at the right pH (a measure of how acidic or alkaline something is). Day to day this balance can be knocked out and into a more acid pH by certain foods, drinks and even things we inhale. When this happens, the body uses bones as a buffer. Bone contains alkali substances which, when released into the blood, bring the pH back to a safe range. To find out more, read our leaflet on [osteoporosis](#).

Up until the age of around 30, we produce bone at a faster rate than we lose it through this acid-balancing process. Beyond this age, however, the rate at which we produce bone starts to reduce. For women, [the rate that bone is lost increases significantly during menopause](#) because oestrogen, which works to promote bone strengthening, reduces. That's one reason women are more likely to encounter osteoporosis or other bone-related issues [later in life](#).

Sadly, some degree of bone loss from the age of 30 is impossible to avoid. However, all is not lost. Before you reach your thirties you can make lifestyle choices which will support the body to reach its maximum potential bone density. Doing this means that when you do lose bone later on in life, you have enough reserve to avoid them getting dangerously fragile.

How to look after your bones at any age

Exercise

Research has found that exercise from a young age can increase the amount of bone that is laid down by the body. A great example of this is a study which compared the bone density in a tennis player's left and right wrist. It found that the wrist the player used to hold the racket had a higher density than the other. So, the saying 'use it or lose it' is particularly appropriate here. The more you utilise and expose your bones to light impact, the more your body will be encouraged to make them stronger.

Gentle running or jumping, like you might in an aerobics class, is a great way to do this as well as regular weight-based training. Unfortunately, exercises like swimming and cycling, although great for cardiovascular health, do not create enough impact to improve bone density and therefore prevent osteoporosis.

Eat bone-friendly foods

It is well known that calcium supports normal bone function. What is less well known is that calcium needs the company of a couple of other nutrients so that it can do its job.

These are vitamin D and vitamin K which both play a role in enhancing calcium's absorption into the body and, in turn, bone. The main sources of vitamin D are the sun (during the summer months) and oily fish. During the winter it is recommended to take a 10 microgram supplement of vitamin D3 to meet requirements. The best sources of vitamin K can be found in green leafy vegetables and cereal grains.

Anti-inflammatory foods

The body becomes inflamed as part of a protective mechanism. It can be short-term, caused by strenuous exercise, acute infections, injury or allergies. It can, however, also be long-term due to chronic disease or being overweight. Although this is a supportive mechanism, it can reduce the body's ability to continue with normal bone production.

So making sure we include foods with anti-inflammatory properties day to day can be beneficial. [Omega-3](#) which is also found in oily fish, is a great anti-inflammatory as are fruits and vegetables. Try to make sure you have at least one serving of oily fish a week and eat at least five portions of [fruits and vegetables](#) each day.

Reduce unfriendly bone foods

Scientists are becoming more aware of a relationship between the increasing prevalence of the 'western diet' and worsening bone health.

It is thought that the high levels of [saturated fat](#), [processed meat](#) and [sugar](#) in this diet cause acidity in the body which then triggers the body to rebalance by releasing elements from bone into the blood.

The high levels of salt in our typical diet are also bad news for bone. One [study](#) suggested that unhealthy eating could lead to almost half our skeletal mass of calcium to be lost in urine over time, mainly because of the amount of salt in the processed foods that are being frequently eaten.

So, although convenient, try to limit the amount of processed foods you consume and always check the labels of products for salt, sugar and saturated fat. And get into the habit of tasting food before you add salt to meals to try to reduce intake.

Keep within a healthy weight range

Being overweight can push your body into an inflamed state. This in turn can disturb the body's ability to strengthen bone and over a long period of time can reduce bone density.

Avoid smoking

[Smoking](#) can have an incredibly negative effect on bone health. This is because smoking not only reduces the body's ability to absorb calcium but also its ability to make bone with the calcium it does manage to absorb.

The good news is that as soon as smoking is stopped, the body can quickly get back to full efficiency, so it is possible to recoup bone density.

If you are over 30, all is not lost!

Although you are not able to create more bone, you can do a lot to maintain what you have.

The story is very much the same as for those under 30. Eat a healthy diet including at least five portions of fruit and vegetables each day and a sufficient amount of protein. Protein intake has been found to be particularly important later in life for both the maintenance of bone and muscle. Finally, keep moving! The more you use your bones the more your body will work to keep them strong. Try to do some form of light impact, weight-bearing exercise five times a week for around 30 minutes.

Concerned about your bone health?

Sarah Leyland, Osteoporosis Nurse Consultant at the [National Osteoporosis Society](#) has this advice.

"If you have broken a bone easily, there are a few things you should do. First, talk to your doctor and find out if you are at risk of further fractures. If you've had a 'fragility fracture' (i.e. you've broken a bone due to a fall from standing height or less) your doctor should send you for a [bone density scan](#) to check if you have osteoporosis. You can also ask about a 'fracture risk assessment' or a 'bone check'. This means looking at factors that influence your bone strength such as your age and medical history. It will help you and your doctors understand why your bones may be more fragile than expected and also show whether you need a drug treatment."

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Last updated by: Rose Constantine Smith 21/12/2017	
Peer reviewed by: Dr Sarah Jarvis MBE, FRCGP 21/12/2017	

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