

Anorexia nervosa and osteoporosis

Anorexia nervosa is an eating disorder where a person limits how much they eat and drink, leading to a low body weight. This can affect your bones in several ways, mainly because of changes in your levels of certain hormones. It can increase your risk of osteoporosis (see page 2) and fractures.

If you have anorexia, the best way to help your bones is to get treatment and support to help you recover from the condition. You might also be referred to a specialist, who may offer to prescribe an osteoporosis drug treatment to help protect your bones.

Who is this fact sheet for?

This information may be helpful if you (or someone close to you):

- have anorexia
- want to know if it will make your bones weaker and cause osteoporosis
- want to know what you can do to help your bones.

It includes the following information:

- What is anorexia nervosa?
- What is osteoporosis?
- Does anorexia cause osteoporosis and fractures?
- How will I know if I'm at risk of osteoporosis and fractures?
- Should I take an osteoporosis drug to strengthen my bones?
- Should I do less exercise if I have anorexia?
- What else can I do to help my bones?
- Getting more information and support

What is anorexia nervosa?

Anorexia nervosa is an eating disorder that causes low body weight and an intense fear of weight gain. Affected people limit the amount they eat and drink, even though they are underweight and not getting the food they need. It's common for people with anorexia to think they are bigger than they actually are.

Anorexia can affect both men and women. It is most common in young women. But at least 1 in 10 people with an eating disorder – possibly as many as 1 in 4 – are men.

What about other eating disorders?

There are other types of eating disorder, such as bulimia nervosa. Bulimia also involves fear of weight gain, but it doesn't always cause severe weight loss.

People with bulimia follow a pattern of eating lots of food (bingeing) and then making themselves sick (purging). Some people use other ways to purge, for example drugs such as laxatives or diuretics (water tablets), or doing lots of exercise to help them lose weight.

What is osteoporosis?

Osteoporosis occurs when the struts that make up the mesh-like structure inside bones become thin. This causes the bone to become fragile and break easily, even after a minor bump or fall. You might hear these broken bones described as ‘fragility fractures’. The terms ‘fracture’ and ‘broken bone’ mean the same thing.

Fractures can occur in many parts of the body, but they are most common in the wrists, hips and spine. It’s these broken bones that can cause pain, rather than osteoporosis itself. Spinal fractures can also cause height loss and a curved spine.

Does anorexia cause osteoporosis and fractures?

It can do. This is because it can affect healthy bone growth and lead to low bone density. If you have low bone density, your bones may be weaker and more likely to break.

How do we usually develop strong bones?

Childhood and the early adult years are a very important time for our skeletons. Your bones quickly get bigger and stronger as you grow, especially during puberty. Your levels of sex and growth hormones change during these years – and this plays an important part in building healthy bones.

Your bones usually reach their maximum strength around the end of your 20s. This is called your ‘peak bone mass’. It largely depends on your genes, but is also affected by what happens in this growth period.

How might anorexia affect my bones?

If you have anorexia, you probably will have low bone density. This is also possible, but less likely, if you have bulimia. There are a number of reasons for this.

- **Your level of oestrogen may drop.** Oestrogen is a hormone that’s important for healthy bones.
- **Your level of insulin-like growth factor 1 (IGF-1) may drop.** IGF-1, a hormone related to growth hormone, is important for healthy bone growth during puberty, and for bone health in general.
- **Your level of cortisol may increase.** High levels of cortisol, a steroid hormone, can affect your bone health.

- **Your bones may not get the nutrition they need.**
- **The size and strength of your muscles may decrease.** This means the bones experience less force from your muscles and may become weaker.

If your anorexia has caused low bone density, your bones may be weaker and you may be more likely to break a bone.

What if I’m a man?

Anorexia and bulimia are often seen as women’s problems. But anyone can be affected. The condition is often not spotted or diagnosed as early in men, which means both the eating disorder and any impact on your bone health may go untreated for longer.

It’s also common for boys and young men with anorexia to combine eating very little with lots of exercise, which can also reduce hormone levels and bone strength.

How will I know if I’m at risk of osteoporosis and fractures?

If you’re underweight due to an eating disorder, you are very likely to have low bone density. This is especially likely if you used to have monthly periods but haven’t had one for months or years. This is because your periods stopping can be a sign of low oestrogen, which can affect your bones.

Your risk of fractures will also depend on a number of other things, such as your age (if you are over 50) and whether you have already broken bones easily.

Should I have a bone density scan?

Not everyone with anorexia needs a bone density scan. If you’ve had anorexia for a long time, then it may be helpful.

If you’re over 50, you may have a scan as part of a general bone assessment. This is recommended for any older person with risk factors for osteoporosis.

Should I take an osteoporosis drug to strengthen my bones?

If you have anorexia, the best treatment for low bone density is treatment of the eating disorder itself. This will restore your body weight and normal hormone levels.

It usually takes expert help and support from an eating disorders team to treat anorexia effectively, including nursing and medical staff, a psychiatrist, family therapist, psychologist and dietitian.

You may be advised to take supplements, as adequate amounts of calcium and vitamin D are needed for bone health. There is some evidence that bone density recovers better in people with good vitamin D levels. However, on its own, this won't make your bones stronger.

Drug treatment is sometimes used to improve bone density, although mainly in people over the age of 50.

If you're under 50

If you're a younger adult, your risk of breaking a bone is likely to be quite low, even if your bone density is low. You'll probably only be offered a drug treatment if your bone density is very low, or you've already broken a bone.

If you are under 50 and need a drug treatment, the options include:

- oestrogen hormone skin patches
- contraceptive pills containing oestrogen
- drugs called bisphosphonates (although this is uncommon).

A bisphosphonate drug treatment may be an option if you're a woman over 18 years of age with anorexia, long-term low body weight, and low bone density for your age. However, it's important to discuss the risks and benefits with your healthcare professional, particularly if you might want to have children in the future. This is because we don't yet know for certain whether bisphosphonates might affect an unborn child.

If you're a young adult, you should only be prescribed a drug treatment if you or your doctor have spoken with a hospital doctor who specialises in child and adolescent health (a paediatrician), or in hormones (an endocrinologist).

If you're over 50

An osteoporosis drug is more likely to be recommended if you're over the age of 50. In older women, the first-choice treatment is likely to be a bisphosphonate drug such as risedronate.

Should I do less exercise if I have anorexia?

In general, exercise is very good for bone health and rarely causes broken bones, even if you have osteoporosis. But you should only exercise if your weight is medically safe and you're consuming enough calories to support the activity. People with anorexia often over-exercise to lose weight, but this could reduce hormone levels and make your bones weaker. So focusing on your recovery is the best thing you can do for your long-term bone health.

Make sure you ask your medical team about the level and type of exercise that's suitable for you.

Their advice will depend on:

- how stable your condition is
- how well you are keeping to your target weight
- whether you are eating enough to support exercise.

They'll often recommend an exercise programme that starts off gently and slowly increases over time, along with advice and information on how to exercise in a healthy way.

If you often break bones or have had spinal fractures, then low-impact exercises may be safest for you.

You can read more about exercise, and watch our series of exercise films, at theros.org.uk/exercise

What else can I do to help my bones?

Other general lifestyle factors that can help to maintain healthy bones include:

- avoiding smoking
- staying within the recommended limits for drinking alcohol.

Anorexia is a complex condition and it can take many years to recover. Your bone health will be at greater risk if you have severe or long-term anorexia. It's important to get your eating disorder diagnosed and to start treatment for your anorexia as early as possible. This is the most important thing you can do for your health and wellbeing, including your bones.

Getting more information and support

We hope this fact sheet has helped you understand the possible impact of anorexia on your bone health. It will hopefully help you feel more confident about discussing your bone health with your medical team.

For more information about osteoporosis and bone health, including drug treatments, please visit our website at theros.org.uk/info

If you need more information or support, talk to your healthcare professional.

You can also call our specialist Helpline nurses with any questions or concerns about bone health, for free, on **0808 800 035**, or email them at nurses@theros.org.uk

You may also find the following organisations helpful:

Talk ED

talk-ed.org.uk/support-services

Beat

beateatingdisorders.org.uk

Adult Helpline: 0808 801 0677

Youthline (under 25): 0808 801 0711

Student Line: 0808 801 0811

National Centre for Eating Disorders

eating-disorders.org.uk

Support Line: 0845 838 2040



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This information is based on the latest evidence and clinical practice. It should not replace advice from your own healthcare professionals.

To give us feedback on this fact sheet, email us at health.info@theros.org.uk

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To view or order more information about osteoporosis and bone health:



theros.org.uk/info



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info@theros.org.uk

To contact our specialist nurses:



0808 800 0035



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