



# Drug treatments for osteoporosis: Alendronate

Alendronate (also known as alendronic acid) is a drug treatment for osteoporosis. It can help to strengthen bones, making them less likely to break. It is available as a weekly tablet, soluble tablet, or liquid that you drink. It is usually the first treatment that people are offered to help improve their bone strength.

## Who is this fact sheet for?

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

- have osteoporosis or a high risk of fractures (broken bones), and want to know how alendronate can help
- want to understand the advantages and disadvantages of alendronate, including the possible side effects.

## It includes the following information:

- What is alendronate?
- Why do I need a drug treatment?
- What does alendronate do and how does it work?
- Who can have alendronate?
- How do I take alendronate?
- How will my treatment be monitored?
- What are the possible side effects?
- Making a decision about treatment
- More ways to look after your bones
- Getting more information and support

### What is osteoporosis?

Osteoporosis is a condition where the bones become weaker and break easily, even after a minor bump or fall. You might hear these breaks described as fragility fractures. The terms 'fracture' and 'broken bone' mean the same thing.

Fractures can affect almost any bone, 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.

### What is alendronate?

Alendronate (sometimes known by the brand names Fosamax<sup>®</sup>, Binosto<sup>®</sup> or Fosavance<sup>®</sup>) is a drug treatment for osteoporosis. It is a type of medication called a bisphosphonate. These are the most common treatments for osteoporosis.

### Why do I need a drug treatment?

Doctors follow guidelines when deciding whether to offer treatments. If your doctor has recommended alendronate, this means your risk of breaking a bone is high enough to need a drug treatment. Alendronate can help to strengthen and protect your bones, making you less likely to break a bone in the future.

It's your choice whether to have alendronate or not. There's information on page 5 to help you decide.

## What does alendronate do and how does it work?

Alendronate can help to make your bones stronger and reduce your risk of broken bones, including hip and spinal fractures.

Bones are made up of living tissue. The inside of our bones is constantly being broken down and rebuilt by specialist bone cells. As long as this process is in balance, your bones should stay healthy and strong.

But if the process becomes out of balance, our bodies can start to break down more bone than we build. This can cause the bones to become weaker and more likely to break easily.

Alendronate works by slowing down the cells that break down bone. This helps to restore the balance and make your bones stronger.

You may still break a bone while taking alendronate. If this happens, it doesn't necessarily mean the drug isn't working. No medication can stop all fractures, but taking alendronate will make them much less likely.

Alendronate is not a pain-relieving medicine, so it won't reduce the pain caused by broken bones. But there are other treatments and ways to manage pain. There's information about these on our website at [theros.org.uk/pain](https://theros.org.uk/pain)

## Who can have alendronate?

Alendronate may be suitable if you have osteoporosis, or if your risk of breaking a bone is high enough to need a drug treatment. It is licensed for use in women who have been through the menopause, and for men. Doctors will occasionally offer it to younger women.

Alendronate tablets are usually the first treatment that people are offered. There are other drug treatments available, but these generally won't be an option unless alendronate is not suitable for you.

Alendronate can also be used after other treatments. For example, you might be offered alendronate if you've just finished a course of treatment and need to start taking a different drug straightaway.

## When is alendronate not suitable?

Alendronate may not be suitable if you:

- have difficulty swallowing
- have a problem with your oesophagus (gullet or food pipe), such as Barrett's oesophagus
- can't stand or sit up for at least half an hour (see page 3)
- have severe kidney problems
- have a low blood calcium level (hypocalcaemia) – you'll need to increase your intake of calcium and vitamin D before you can start alendronate
- are pregnant or breast-feeding.

## How do I take alendronate?

Alendronate is available in the following forms:

- 1 tablet (70mg) every week – this is the most common way to take alendronate
- 1 soluble tablet (70mg) that you dissolve in water and drink every week
- 1 liquid medicine (containing 70mg of alendronate) that you drink every week
- 1 tablet (70mg alendronate with vitamin D) every week.

Make sure you take your alendronate on the same day each week. It may help to make a note in your diary or set a reminder on your phone.

The following steps are important for ensuring the treatment works properly. They will also help to make side effects less likely (see page 3).

### Take alendronate as soon as you wake in the morning

It's very important to take alendronate on an empty stomach. Then wait at least 30 minutes before having your first food or drink of the day (other than plain tap water). This is to make sure your body can absorb and use the drug.

If you forget to take your treatment, wait until the following morning before taking it. Then return to your usual day the following week.

### Follow the instructions for your treatment

#### Tablets (generic alendronate, Fosamax<sup>®</sup>, Fosavance<sup>®</sup>):

Swallow your tablet whole, with a glass of plain tap water. It's important not to crush, chew or suck it.

**Soluble tablets (Binosto<sup>®</sup>):** Dissolve your weekly tablet in at least 120ml of water. Once the liquid has stopped fizzing, drink the medicine. Then drink at least 30ml (2 tablespoons) of plain tap water.

**Liquid medicine (alendronate oral solution):** This comes in a small bottle containing a single weekly (100ml) dose. Swallow all of the medicine, then drink at least 30ml (2 tablespoons) of plain tap water.

### **Don't take other medicines or supplements during this time**

If you take calcium supplements, wait at least half an hour after taking alendronate. This is because calcium can affect how well the drug is absorbed. Some doctors suggest waiting up to four hours, to leave even more time for the drug to be absorbed.

### **Stay upright for at least 30 minutes afterwards**

You must not lie down for at least half an hour after taking alendronate, and until you've eaten something. This helps the treatment to go down quickly into the stomach where it is absorbed. Your food pipe is more likely to become irritated if you lie down straightaway.



**"I take my alendronate on a Sunday morning, immediately after I get up. I use the half hour after taking the tablet to prepare my breakfast, catch up on my messages etc., so I am not waiting around feeling irritated."**

## **How will my treatment be monitored?**

When you start on alendronate, you may have an appointment after around three months, and again after one year. This is to check you're taking your treatment properly and not having any problems. Tell the doctor, nurse or pharmacist if you have any side effects (see below). They may be able to suggest ways to help manage them.

If you break a bone while taking alendronate, speak to your GP. Breaking a bone doesn't necessarily mean your treatment isn't working. But it may be a good idea to have a bone health assessment.

After about five years on alendronate, you should have a formal treatment review. Ask your doctor when this should happen if you're unsure.

At this review, your doctor will check if you still need a drug treatment, and that alendronate is still the right treatment for you.

You may have a bone density scan as part of your review, which will give your doctor some information about your bone strength. But they will need to consider other things as well, such as whether you've broken any bones since starting on alendronate.

While there's no way to prove for certain that your treatment is working, research has shown that drugs like alendronate do lower people's risk of broken bones.

After your review, your doctor may advise you to:

- stay on alendronate for another five years
- stop treatment for a year or two, if this is safe for you – this is known as a treatment pause
- start a different drug treatment instead of alendronate
- stop having any treatment.

Alendronate is a long-lasting treatment and should keep helping your bones for about 2-3 years after you stop having it. Your doctor can advise you on what's best for you, based on your own situation.

## **What are the possible side effects?**

As with any drug, alendronate can sometimes cause side effects. The most common side effects are listed on page 4, along with some rare problems that might very occasionally happen after several years of treatment.

It is important to remember that in general, side effects are less common than many people think. Most people on alendronate don't have any problems. Even if you do get side effects at first, they usually improve quickly and there are ways to manage them.

For a full list of possible side effects, look at the patient information leaflet that comes with your treatment. If you don't have a copy, ask your doctor or pharmacist for one.

It's important to understand that many of these problems aren't actually caused by the drug. When a medicine is first tested, the people taking it have to report anything unusual to the researchers. The problems they report are often just as common in people who aren't taking the drug.

The problems listed on page 4 are the main side effects that were seen more often in people taking alendronate, rather than a dummy drug.

The following table has information on the main side effects and how common they are. For example, fewer than 1 person in every 10 people who take alendronate will get problems with their oesophagus (food pipe) or heartburn. The other 9 in every 10 people who use the drug will not have this problem.

If you do get any side effects that don't go away, it may help to:

- make sure the problem isn't caused by any other medicines you are taking
- tell your doctor or pharmacist, who may be able to help find out what is causing the problem
- ask your doctor or pharmacist about other treatments that may suit you better.

### Possible side effects of alendronate:

Side effect	How common is it?	What can I do about it?
Inflamed oesophagus (food pipe), sore throat, difficulty swallowing. A painful, burning feeling in your chest (heartburn)	Less than 1 in 10	Take the tablet with a full glass of tap water. Stay upright and avoid bending forward for at least 30 minutes afterwards. This should stop the treatment from sticking in your food pipe. If the problem doesn't improve, tell your doctor.
Bone, joint or muscle pain	Less than 1 in 10	This usually improves as your body gets used to the new medicine. A simple pain-relieving medication, such as paracetamol, may help.
Diarrhoea	Less than 1 in 10	Drink plenty of water to avoid getting dehydrated. If the problem doesn't improve, ask your doctor about other drug treatment options.
Constipation	Less than 1 in 10	Try to eat plenty of fibre and drink lots of water. Exercise can also help. If you take calcium supplements, these can also cause constipation. You may want to consider getting more calcium from food, and less from supplements. If your calcium supplements are prescribed by your doctor, check with them before changing the amount you take.
Headache	Less than 1 in 100	A simple pain-relieving medication, such as paracetamol, should help.
Eye inflammation, causing pain or blurred vision	Less than 1 in 100	Tell your doctor if you already have an inflammatory eye condition or develop symptoms such as a painful red eye.

### Rare health risks:

Atypical (unusual) thigh bone fracture	Less than 1 in 1,000	This is a rare type of thigh bone fracture that can occasionally happen, even with little or no force. It is most likely to happen after many years of treatment.
Osteonecrosis of the jaw	Less than 1 in 1,000	This is a rare problem where healing inside the mouth is delayed, usually after major dental treatment. The general advice is to maintain good oral hygiene and have regular dental check-ups.

For more information on these very rare conditions, read our fact sheets, '**Atypical (unusual) thigh bone fractures**' and '**Osteonecrosis of the jaw (ONJ)**', or visit our website at [theros.org.uk/info](http://theros.org.uk/info)

## Making a decision about treatment

Some people worry about starting a new drug treatment and find it hard to make a decision. You might be concerned about possible side effects or health risks, or wonder if you really need treatment. Or you might not like taking medication in general.

It's important to learn all you can about your treatment options, so you can decide what's right for you. Talk to your doctor so that you fully understand your situation. Make sure you read – and understand – any information they give you, as well as the leaflet that comes with the treatment.

No-one can make you have treatment if you don't want it. But do take the time to understand the benefits and possible risks – both of taking alendronate, and of **not** taking alendronate.

Take care when visiting online forums or chat groups on social media. Reading about other people's experiences can be helpful. But you may not always see a balance of views online. People are more likely to seek support for bad experiences than good ones. This can make it seem that everyone has problems with drug treatments. In reality, most people have no side effects at all.

If you do feel worried, before or during your treatment, talk to your doctor or pharmacist, or contact our specialist Helpline nurses.

### Why have I been offered alendronate?

If you've been offered alendronate, this means your risk of breaking a bone is high enough that your bones would benefit from a drug treatment. For you, the benefits of taking this drug are likely to outweigh any possible risks. In other words, your risk of health problems if you do have treatment is smaller than your risk of breaking a bone if you don't have treatment.

Your doctor will have considered lots of things before recommending alendronate, including:

- how likely you are to break a bone without treatment
- whether a medicine that you have to swallow regularly is suitable for you
- any other health problems you have
- any other medications you take
- the treatments available at your local hospital or GP surgery
- your own thoughts and feelings about treatment.

There are other treatments available for osteoporosis, but they may not all be suitable for you. For example, some tablets have to be taken daily, which isn't ideal for everyone. Some drugs are usually only available if you've already tried other drug treatments, or if other medications aren't suitable for you. And in some areas, local guidance means doctors can only prescribe certain drugs.

If you have any questions about the treatment you have been offered, speak to your doctor. They can explain why they've recommended alendronate and tell you about any other drug treatment options that might be suitable.

### Think about the advantages and disadvantages

As with any treatment, there are advantages and disadvantages to using alendronate. You should think about these when deciding whether to have alendronate, and about what's important to you.

Here are some of the main things to consider.

#### Advantages

- It can help to reduce your risk of broken bones.
- It's available as a weekly tablet, soluble tablet, or liquid that you drink.
- It is effective for at least ten years of use.
- It keeps helping your bone strength for a while, even after you stop taking it.

#### Disadvantages

- As with all medications, some people get side effects (see page 3).
- There are some possible health risks after several years of use, but these are rare (see page 4).
- Tablets and liquid medicines won't be suitable for everyone.

### What will happen if I don't have a drug treatment?

If you decide not to take a drug treatment, it is likely that your bones will get weaker over time. This means your chance of breaking a bone will increase.

Some people may never break any bones, while others may break several. Everyone's risk is different, so it's important to understand your own situation and make the decision that's right for you.



### Is there a natural alternative to medication?

People often want to know if they can improve their bone strength without taking a drug treatment. The lifestyle changes listed below are all important for your bones. But if you have a high risk of broken bones, there isn't good evidence that any non-drug approaches will improve your bone strength enough to reduce the chance of breaking a bone.

### More ways to look after your bones

As well as taking medication, a healthy lifestyle is important for your bone health. This includes:

- a well-balanced, varied and calcium-rich diet
- safe exposure to sunlight, so that your skin makes vitamin D
- regular weight-bearing impact exercise and muscle-strengthening exercise
- not smoking
- not drinking more than the recommended levels of alcohol
- taking steps to lower your risk of falling, as falls can lead to broken bones.

### Calcium and vitamin D

Getting enough calcium and vitamin D is very important for your bones. While you're having a drug treatment, your doctor may advise you to:

- aim to consume around 1,000mg of calcium a day
- take a daily 20 microgram (20µg or 800 IU) supplement of vitamin D.

This is more than the usual recommended amount, to make sure you are getting enough for your bones. Your doctor may sometimes recommend higher or lower doses, depending on your own situation.

For more information on healthy living, including our calcium and vitamin D-rich food choosers, tips for preventing falls, and our films and fact sheets on how to exercise safely for your bones, visit our website at [theros.org.uk/healthy-bones](https://theros.org.uk/healthy-bones)

### Getting more information and support

We hope this fact sheet will help you feel more informed and confident when discussing your bone health with your medical team.

For more information about osteoporosis and bone health, including fact sheets on all available drug treatments, visit our website at [theros.org.uk/info](https://theros.org.uk/info) or order more of our printed publications.

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 or living with osteoporosis, for free, on **0808 800 0035** or email them at [nurses@theros.org.uk](mailto:nurses@theros.org.uk)



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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](mailto:health.info@theros.org.uk)

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 [info@theros.org.uk](mailto:info@theros.org.uk)

To contact our specialist nurses:

 0808 800 0035

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