

# Drug treatments for osteoporosis: Zoledronate

Zoledronate (also known as zoledronic acid or Aclasta<sup>®</sup>) is a drug treatment for osteoporosis. It can help to strengthen bones, making them less likely to break. It is given as an intravenous infusion (IV or 'drip') once a year. You may be offered zoledronate if a drug treatment in tablet form isn't suitable for you, or if you have recently broken a hip.

## 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 zoledronate can help
- want to understand the advantages and disadvantages of zoledronate, including the possible side effects.

## It includes the following information:

- What is zoledronate?
- Why do I need a drug treatment?
- What does zoledronate do and how does it work?
- Who can have zoledronate?
- How is zoledronate given?
- 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 zoledronate?

Zoledronate (sometimes known as the brand name Aclasta<sup>®</sup>) is a drug treatment for osteoporosis. It is a type of medication called a bisphosphonate. Bisphosphonates 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 zoledronate, this means your risk of breaking a bone is high enough to need a drug treatment. Zoledronate 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 zoledronate or not. There's information on page 5 to help you decide.

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

Zoledronate 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.

Zoledronate 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 zoledronate. If this happens, it doesn't necessarily mean the drug isn't working. No medication can stop all fractures, but taking zoledronate will make them much less likely.

Zoledronate 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/info](https://theros.org.uk/info)

## Who can have zoledronate?

Zoledronate 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 often used in people who have recently broken their hip.

It is licensed for use in women who have been through the menopause, and for men. Doctors will occasionally offer zoledronate to younger women.

Most people are given tablets (daily, weekly or monthly) at first, rather than zoledronate. But your doctor may recommend zoledronate if tablets aren't suitable for you.

You may also be offered zoledronate as a second drug treatment. For example, you might swap to zoledronate if you're having problems with your first treatment, or if you've been on your first drug for several years and your doctor has recommended a change.

### When is zoledronate not suitable?

Zoledronate may not be suitable if you:

- have a low blood calcium level (hypocalcaemia) – you'll need to increase your intake of calcium and vitamin D before you can start zoledronate
- have severe kidney problems
- are pregnant or breast-feeding.

## How is zoledronate given?

Zoledronate is given as an intravenous infusion (IV or 'drip') once a year. This will usually happen at a hospital, although some GP surgeries may occasionally give zoledronate.

The drug is given through a needle into a vein. It takes at least 15 minutes to receive the full dose.

### Before your treatment

It's very important to have enough calcium and vitamin D while you're on zoledronate. Your doctor may advise you to take supplements, to make sure you're getting enough for your bones (see page 6).

Your doctor will recommend blood tests before each zoledronate infusion, to check your calcium and vitamin D levels. If they are very low, your doctor may delay your treatment until your levels have improved. You may also have a blood test to make sure your kidneys are working well.

Make sure you drink at least one or two glasses of water, before and after each dose, to avoid dehydration.

## How will my treatment be monitored?

You'll have an appointment once a year to receive your treatment. Contact your healthcare professional if you have any problems in-between these appointments. They may be able to suggest ways to help manage any side effects (see page 3).

If you break a bone while having zoledronate, 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 three years on zoledronate, you should have a formal treatment review. At this review, your doctor will check if you still need a drug treatment, and that zoledronate is still the right drug for you. You may have a bone density scan, 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 zoledronate.

While there's no way to prove for certain that your treatment is working, research has shown that osteoporosis drug treatments like zoledronate do lower the risk of broken bones.

After your review, your doctor may advise you to:

- stay on zoledronate for another three 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
- stop having any treatment.

Zoledronate 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, zoledronate 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 zoledronate 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 leaflet that comes with your treatment. If you don't have a copy, ask your doctor or pharmacist for one.

It's important to realise 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. 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 zoledronate, rather than a dummy drug.

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 medication 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 zoledronate:

The following table has information on the main side effects and how common they are. For example, up to 3 in every 10 people on zoledronate get flu-like symptoms after the first dose. The other 7 in every 10 people who use the drug will not get this problem.

Side effect	How common is it?	What can I do about it?
Flu-like symptoms (such as fever, chills, muscle or joint pain, headache)	Up to 3 in 10 after the first infusion Much less common after later doses	These symptoms are very common after the first dose. They usually go away after a couple of days. A simple pain-relieving medication, such as ibuprofen or paracetamol, may help. Try not to plan anything very active for a few days, in case you get symptoms. You're much less likely to get these symptoms after later doses.
Bone, joint or muscle pain	Less than 1 in 10	This usually improves as your body gets used to the drug. A simple pain-relieving medication may 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.
Fast and irregular heartbeat (atrial fibrillation)	Uncommon and not seen in all studies	This is unlikely to happen. But make sure your doctor knows if you have – or have an increased risk of – atrial fibrillation.

## 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 after many years of treatment, even with little or no force.
Osteonecrosis of the jaw	Less than 1 in 1,000	This is an extremely 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](https://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 zoledronate, and of **not** taking zoledronate.

Take care when visiting online forums or chat groups on social media. Reading about 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 zoledronate?

If you've been offered zoledronate, 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 zoledronate, including:

- how likely you are to break a bone without treatment
- whether an infusion would be more suitable for you than tablets or injections
- any other health problems you have
- any other medications you take
- the treatments available in your local area
- 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, most bisphosphonates are tablets, which aren't suitable for everyone. Some drugs – including zoledronate – may not be available unless you've already tried other drug treatments, or unless 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've been offered, speak to your doctor. They can explain why they've recommended zoledronate and tell you about any other treatments that might be suitable.

### Think about the advantages and disadvantages

As with any treatment, there are advantages and disadvantages to having zoledronate. You should think about these when deciding whether to have zoledronate, 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 given as a drip once a year, so you can forget about it in-between doses.
- It starts to work quickly and is effective for at least three years of use.
- It keeps helping your bone strength for a while, even after you stop taking it.

#### Disadvantages

- You'll usually need to visit your local hospital to have this treatment.
- 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).
- Some people don't like the idea of being on a drip.

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

If you decide not to have 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 having a drug treatment, 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 prepared 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)



Content reviewed: March 2023

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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To contact our specialist nurses:

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