



PATIENT INFORMATION ON BISPHOSPHONATES (INTRAVENOUS / IV) (Examples of brand names: Aclasta, Aredia)

This information sheet has been produced by the Australian Rheumatology Association to help you understand the medicine that has been prescribed for you. It includes important information about:

- **how you should take your medicine**
- **the possible side effects**
- **other precautions you should take while you are taking bisphosphonates.**

Please read it carefully and discuss it with your doctor.

Important things to remember

- While you are being treated with an intravenous bisphosphonate you should see your doctor regularly to make sure you are getting the most benefit from the treatment and to minimise any possible side effects.
- If you are concerned about any side effects you should contact your doctor as soon as possible.

For more information about OSTEOPOROSIS see the Osteoporosis Australia website <http://www.osteoporosis.org.au/> or phone Osteoporosis Australia on 1800 242 141.

What are bisphosphonates?

Bisphosphonates are medicines used to treat bone diseases such as osteoporosis and Paget's disease. Zoledronate (brand name Aclasta) and pamidronate (brand name Aredia) are the most commonly prescribed intravenous bisphosphonates in Australia.

Osteoporosis is a common disease that causes bones to become fragile and brittle so that they break (fracture) more easily.

Fractures may be painful and restrict a person's ability to carry out their normal daily tasks. Bisphosphonates reduce the risk of a fracture occurring in osteoporosis.

In Paget's disease, the formation of abnormal bone causes deformity and pain. Bisphosphonate medicines can help reduce these symptoms.

How do they work?

Bone is constantly changing with old bone breaking down and new bone being formed to take its place. This usually happens in a balanced way. If the cycle becomes unbalanced, bone is broken down faster than it is replaced. This leads to osteoporosis.

Bisphosphonates are medicines that slow or stop the bone breaking down. As a result, bone density may increase over time so the risk of fracture is reduced.

What benefit can you expect from your treatment?

Since osteoporosis doesn't usually have any symptoms such as pain (until a fracture occurs)

you will not 'feel' any immediate benefit from your treatment with bisphosphonates.

If used for Paget's disease, bone pain may lessen with time. Your doctor will explain the likely benefits for you.

You may be asked to have tests to check the effect of treatment on your bones. For example, a bone mineral density test is usually done after one to two years of treatment. This is an X-ray that involves a very small amount of radiation.

Sometimes tests of urine or blood are also used to measure the effects of treatment on bone formation and breakdown.

How are IV bisphosphonates given?

Bisphosphonate injections are given as a drip (infusion) into the vein. The infusion will take between 20 minutes and two hours depending on the type of bisphosphonate being given and the condition being treated.

After the infusion, you may have to remain at the clinic for up to an hour to monitor for reactions.

Bisphosphonate infusions may be given once a year or up every two-three years or every three months depending on the type prescribed and the condition being treated.

Bisphosphonate injections come in different doses. The dose and how often it is given will depend on the type of bisphosphonate being used and the condition being treated.

Can other medicines be given with bisphosphonate injection?

It is safe to use most other medicines when you are having bisphosphonate infusions (see *Precautions* on page 3).

You may be prescribed paracetamol and an anti-allergy tablet on the day of your infusion.

It is generally recommended that you take a calcium and vitamin D supplement.

How long is the treatment continued?

For osteoporosis treatment with intravenous bisphosphonates is usually given for two to five years. Your doctor will review your progress each year. For Paget's disease, the treatment plan may be shorter.

Are there any side effects?

Most people who have bisphosphonate injections do not experience side effects. Tell your doctor if you are concerned about possible side effects.

A reduction in dose or change to another medicine may minimise the side effects so that you can continue to have treatment for your bones.

Most common possible side effects

- The most common side effect is a *rise in temperature*, typically at the start of treatment, with *flu-like symptoms* such as aching muscles. Rarely the fever may last for one or two days. Giving the medicine slowly and taking regular paracetamol for 24 -48 hours reduces the likelihood of this happening.
- Some *irritation* at the site of the infusion may occur.
- Intravenous bisphosphonates can cause *nausea, loss of appetite* and a *skin rash*. These effects will not last for long.

Less common or rare possible side effects

- Bisphosphonates may cause *mouth ulcers, aching muscles, joints and/or bones* and *swelling of joints*.
- A very rare side effect with intravenous bisphosphonates is *osteonecrosis of the jaw (ONJ)*. This presents with jaw pain and exposed bone in the mouth. It usually occurs after dental work that has not healed properly. There are few reports of ONJ in patients with osteoporosis and it is seen mostly in cancer patients receiving high dose/monthly bisphosphonate treatment. For most patients receiving bisphosphonate injections the benefits outweigh the potential risk of ONJ because fractures can be associated with significant complications and even death. As a precaution it is recommended that dental infections should be treated, and planned extractions performed before starting bisphosphonate treatment.
- *Blurred vision, pain or redness* in the eye (called *iritis*) may occur and may need to be treated with eye drops. If any of these symptoms occur see your doctor.
- An increased frequency of *heart palpitations* (feeling of fast or irregular heartbeat) has been seen in some patients with zoledronate.

- *Worsening kidney function.* As a precaution it is advised that patients with severe (stage 4) kidney disease should not receive intravenous bisphosphonates.

What precautions are necessary?

Care of your teeth and mouth

- Before starting bisphosphonate treatment have your teeth checked by your dentist. If surgery on the jaw bone is necessary, this should be done before you start the treatment.
- While having treatment with bisphosphonates you should maintain good oral hygiene and have regular dental checkups.

Blood tests

Kidney function and blood calcium levels should be checked before treatment.

Use with other medicines

- You should tell your doctor (including your general practitioner, rheumatologist and

others) about all medicines you are taking or plan to take. This includes over the counter or herbal/naturopathic medicines. You should also mention your treatment when you see other health professionals.

- Bisphosphonates should not be taken together or with other anti-osteoporosis medicines such as denosumab (Prolia), or raloxifene (Evista),
- The risk of side effects from the low doses of aspirin used to prevent heart attack and strokes is not increased when taken with bisphosphonates.
- The simple pain reliever paracetamol, and combined medicines such as Panadeine and Panadeine Forte, can be used while you are receiving bisphosphonate injections.

Use in pregnancy and breastfeeding

- Bisphosphonates are not recommended to be taken during pregnancy or when breastfeeding. If you are planning a family or become pregnant you should discuss this with your doctor as soon as possible.
- More detailed information is available at <https://rheumatology.org.au/gps/documents/ARAPregnancyPrescribingGuidanceupdateApr19.pdf>

Questions?

If you have any questions or concerns write them down and discuss them with your doctor.

Your doctor's contact details

If you are taking bisphosphonates you should see your rheumatologist regularly to make sure the treatment is working and to minimize any possible side effects.

The information in this sheet has been obtained from various sources and has been reviewed by the Australian Rheumatology Association. It is intended as an educational aid and does not cover all possible uses, actions, precautions, side effects, or interactions of the medicines mentioned. This information is not intended as medical advice for individual problems nor for making an individual assessment of the risks and benefits of taking a particular medicine. It can be reproduced in its entirety but cannot be altered without permission from the ARA. The NHMRC publication: *How to present the evidence for consumers: preparation of consumer publications* (2000) was used as a guide in developing this publication.