



Drug treatments for osteoporosis: Denosumab

This leaflet explains Denosumab (also called Prolia) treatment which is a treatment for osteoporosis. This includes how it works, how it is taken and its benefits/possible side effects.

What is Denosumab?

Denosumab is a drug treatment that is used to reduce the risk of broken bones in people with osteoporosis. It is given as a sub-cutaneous injection (just under the skin) every 6 months.

How does this medication work?

This medication works to counteract bone density loss associated with osteoporosis or osteopenia and reduces the likelihood of further lower impact fractures (bones breaking easily with very little force). Bone is constantly being broken down and rebuilt by specialist bone cells – called bone remodelling. When this becomes out of balance and more bone is broken down than is rebuilt, osteoporosis occurs. Denosumab inhibits the cells (osteoclasts) that break down bone and as a result, prevents bone loss.

Why should I take this medication?

Although the thought of taking a new medication can be daunting, we would only recommend this medication if we feel it is necessary. Osteoporosis is a lifelong disease and the decisions we make now will likely have an impact on the effects of the condition in your later life. If untreated, osteoporosis / osteopenia will likely worsen and can lead to significant fractures (particularly of the hip and spine). These fractures can cause a great deal of discomfort and are likely to affect your mobility. This medication, if taken properly, can significantly lower a person's risk of fractures and enables patients with reduced bone mineral density to continue to live active lifestyles.

How long should I take this medication for?

The current advice from the UK drug regulatory organisation (MHRA) is that this medication is considered lifelong. If your GP is considering stopping the medication, then it is recommended they contact our Rheumatology service for further guidance before doing that. Your clinician will then be able to advise you on what is best for you, based on your individual circumstances.

Note: It is very important to have each subsequent dose as close to 6 months from the previous injection as possible. This ensures the best bone density protection. Doses can be given up to 4 weeks early and 4 weeks late, when necessary.

How can I get the most out of my drug treatment?

1. Be informed

Find out about your drug treatment so that you can be involved in any decisions being made and will know what to expect. Talk to the Fracture Liaison Service and/or contact the helpline at the Royal Osteoporosis Society if you have any questions or concerns.

2. Make sure you have enough calcium and Vitamin D

It is important that you have enough calcium and Vitamin D while being prescribed Denosumab. Many people take these in supplement form alongside this medication. It is likely that you will be asked to have a blood test prior to each injection to check your kidneys are functioning correctly and your calcium & Vitamin D levels are at the right level for this medication to be safe and effective.

3. Make sure Denosumab is the treatment for you

If you have any of the following, please speak to a clinician before commencing Denosumab:

- A low blood calcium level (also known as hypocalcaemia).
- A rare hereditary intolerance to fructose.
- Severe kidney problems.
- If you are awaiting significant dental work.
- A frequent history of urinary tract infections or a condition of the skin called cellulitis.

4. Continue to take your treatment regularly and ensure you discuss an alternative treatment plan before stopping Denosumab.

The effects of Denosumab wear off quickly, 6 months after your most recent injection. 'Rebound fractures', particularly in the spine, have been noted in some patients who stop taking Denosumab and do not receive an alternative. This is why it is important that doses are not missed or significantly delayed.

Denosumab is likely to be recommended for at least 10 years or even longer, but there is no formal guidance as to how long the course should be. Usually, if Denosumab is stopped, you will be prescribed another drug (such as a bisphosphonate) for at least 1 year to help keep your bones strong.

5. Lead a healthy lifestyle to keep your bones strong

Factors that can help to maintain healthy bones are:

- A well-balanced diet with adequate [calcium-rich foods](#);
- Safe exposure to sunlight to obtain [Vitamin D](#);
- Regular [weight-bearing exercise](#);
- Avoiding [smoking and keeping alcohol/caffeine](#) consumption within the recommended limits.

If you have been diagnosed with osteoporosis and are taking a drug treatment for this, you may need to boost your calcium intake and Vitamin D levels. Your clinician can prescribe supplements of vitamin D and/or calcium if you need them.

6. Understand the risk of side effects and what can be done to reduce them

As with any drug, there are potential side effects with Denosumab. Please remember that:

- Most people will not experience side effects, or if they do, they last only a short period after you start treatment, usually a day or perhaps two.
- The risk of the vast majority of the side effects can be reduced significantly by looking after your whole body health. This medication has been in use for many years and has proven to be a safe and effective treatment for osteoporosis.
- Due to the rare risk of side effects following significant dental work while taking this medication, please ensure you attend regular check-up appointments with your dentist.

The most important thing to remember with these medications is that there are almost always alternatives. If you do not tolerate this medication for any reason, please contact either your GP or the Fracture Liaison Service to discuss any problems.

Possible side effects:

Side effect	How common is it?	What can I do about it?
Severe skin infection	Less than 1 in 1000	Report this side effect to your GP team
Low blood calcium levels	Less than 1 in 1000	You will have regular blood tests to check your calcium levels.
Atypical thigh bone fracture (break of the thigh bone that happens with little or no trauma)	Very rare	This is a very rare side effect that can occur after many years on treatment. Please report any new unexplained thigh pain that does not go away.
Osteonecrosis (bone tissue death) of the jaw	Very rare	Maintain good oral hygiene and have regular check-ups.

Further information

The Royal Osteoporosis Society website has lots of useful information and advice. Visit <https://theros.org.uk/information-and-support/support-for-you/fact-sheets-and-booklets/> For osteoporosis information and support, contact the specialist nurse helpline: nurses@theros.org.uk or 0808 800 0035. This information is provided free of charge.

Contacting us

Fracture Fragility Service / Bone Health Team:

Tel: 0118 322 5111 (Extension 3542) or email: Rbft.flis@nhs.net

To find out more about our Trust visit www.royalberkshire.nhs.uk

Please ask if you need this information in another language or format.

RBFT Fracture Fragility Service

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