

# Osteonecrosis of the jaw (ONJ) and drug treatments for osteoporosis

## What is osteoporosis?

Osteoporosis occurs when the struts which make up the mesh-like structure within bones become thin causing them to become fragile and break easily, often following a minor bump or fall. These broken bones are often referred to as 'fragility fractures'. The terms 'fracture' and 'broken bone' mean the same thing. Although fractures can occur in different parts of the body, the wrists, hips and spine are most commonly affected. It is these broken bones or fractures which can lead to the pain associated with osteoporosis. Spinal fractures can also cause loss of height and curvature of the spine.

There is information suggesting a link between some drugs used to treat osteoporosis and a very rare condition called osteonecrosis of the jaw (ONJ). This factsheet has been produced in response to the many questions the Royal Osteoporosis Society's Helpline receives on this subject prompted by media stories and the often confusing information that is available online. It is important to remember that osteonecrosis of the jaw is very rare in people taking drug treatments for osteoporosis and in the majority of people the benefits of taking a drug treatment will far outweigh the risk.

## Why do I need a drug treatment for osteoporosis?

Drug treatments are prescribed if you have osteoporosis and are at a high risk of broken bones. These treatments help strengthen your bones and reduce your risk of having fractures.

## What is osteonecrosis of the jaw (ONJ)?

ONJ is a condition in which there is delayed healing of the jaw, resulting in unhealed areas inside the mouth, and the underlying jaw bone remaining exposed for longer than would normally be expected. The majority of reported cases have been associated with dental disease such as infection, or invasive dental procedures such as tooth extraction, although ONJ may also occur spontaneously

## How common is ONJ in people taking drug treatments for osteoporosis?

Osteonecrosis of the jaw in those taking bisphosphonates for osteoporosis is very rare. The estimated incidence is between 1 in 1,000 and 1 in 10,000 per year of bisphosphonate use. The incidence for injectable bisphosphonates and for denosumab is likely to be similar. There is a small amount of evidence from the research trials that suggests ONJ risk increases slightly more if bisphosphonates are taken for a long time.

## Which drug treatments for osteoporosis have been linked with this condition?

Drug treatments belonging to the bisphosphonate family (alendronic acid, risedronate [Actonel], ibandronic acid [Bonviva], zoledronic acid [Aclasta]) and the injectable treatment denosumab [Prolia] have been associated with ONJ.

## Do osteoporosis drugs increase the risk of ONJ and how do they do this?

The drugs listed above seem to increase the risk of ONJ although there is no clear understanding as to how they do this. ONJ can occur in people not taking any osteoporosis treatments and among those taking such treatments the condition, as outlined, is very rare. ONJ is more clearly linked, however, with the use of very high doses of therapy with bisphosphonate drugs or denosumab in patients who are undergoing treatment for cancer.

## What can I do to reduce my risk of ONJ during osteoporosis treatment?

- If you are taking a bisphosphonate or denosumab for the treatment of osteoporosis the expert advice, as for the general population, is to maintain good oral hygiene, see your dentist regularly every 6 months and report any problems such as loose teeth, pain or swelling to your dentist. The risk of ONJ related to bisphosphonate therapy taken for osteoporosis is very small so you don't need to take any special precautions.
- Some other factors such as poor oral hygiene, cancer, chemotherapy or taking glucocorticoid ("steroid") tablets may mean your ONJ risk might be slightly increased so in these circumstances you should probably have your teeth checked before starting an osteoporosis drug treatment. In these circumstances you may be referred to a dental hospital if you require an invasive procedure.
- If you are going to start a bisphosphonate, such as zoledronate, for treatment of cancer (where the doses are much higher than used for osteoporosis), the expert advice is that you should have a dental examination and complete any dental procedure involving exposure of bone, such as tooth extraction, before starting the treatment.

## Will stopping my osteoporosis drug treatment before I have dental work performed reduce the risk of ONJ?

There is no research to date to suggest that stopping treatment with a bisphosphonate or denosumab before you have any dental work performed, will reduce your risk of ONJ. You should discuss any necessary work with your dentist but in the absence of any additional risk factors (including having poor oral hygiene, cancer, chemotherapy or glucocorticoid ("steroid") therapy), it should be possible to go ahead without any significant concerns. In fact routine care by a dental professional would be recommended. All dentists should be aware of guidance from their professional organisations about the management of patients on osteoporosis treatments such as bisphosphonates or denosumab. NHS Education for Scotland Dental Clinical Effectiveness Programme has produced guidance for dentists which is available on their website [sdcep.org.uk](http://sdcep.org.uk)

## Do I need a referral to a dental hospital for dental procedures if I am having a bisphosphonate via injection or drip for osteoporosis or have had osteoporosis drugs for many years?

No, if you don't have other risks (including having poor oral hygiene, cancer, chemotherapy or glucocorticoid ("steroid") tablets), your risk is considered to be low and experts recommend you do not require referral to a dental hospital for invasive dental procedures. The route via which you are receiving your osteoporosis treatment or the length of time you have been taking it should not affect where you receive your dental treatment.

## My dentist is refusing to treat me because I am taking an osteoporosis treatment.

Despite the very low risk of ONJ some dentists appear to be unnecessarily cautious when treating all people taking osteoporosis drugs and may not want to treat you. In this situation, talk to your doctor or other health professional involved in your care who may be able to help. If you have been taking a bisphosphonate drug for more than 5 years or you have been having denosumab injections or a bisphosphonate with glucocorticoids ('steroids') then your ONJ risk may be slightly higher. Despite this your dentist should still be able to take a tooth out if you need an extraction although other options will be explored first.

## I understand that the risk of ONJ is very low but it still really worries me – what can I do?

Talk to your doctor and explain your concerns. Ask about the likely potential benefits of treatment for you and also the risk of adverse effects including ONJ. Unfortunately no drug treatments is free from side effects but if you are still worried explain this to your doctor, as there may be other drug treatments which you can take.

For further information on drug treatments for osteoporosis, such as how to decide which drug to take, see our information resources. Fact sheets are available on each osteoporosis drug.


This information reflects current evidence and best practice but is not intended to replace the medical advice provided by your own doctor or other healthcare professional.

This is one of many information resources available about osteoporosis and bone health. View the range at [theros.org.uk](http://theros.org.uk) and order more by calling us on **01761 471 771** or emailing [info@theros.org.uk](mailto:info@theros.org.uk)

President: HRH The Duchess of Cornwall. Formerly known as the National Osteoporosis Society.  
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