

# Osteoporosis medication



**Early diagnosis** a bone healthy lifestyle, and medication can allow people with osteoporosis to remain fracture free.

Your doctor, specialist or fracture liaison nurse may have sent you for a dual energy x-ray absorptiometry (DXA) scan (often called a bone mineral density (BMD) test).

The results of this test can be used to complete a clinical risk assessment (but are not essential to doing so). Your doctor may carry out this assessment, or you can do it yourself by completing the clinical risk assessment tool Know your Bones™ (KYB) and taking the summary report to your doctor.

If you're diagnosed with osteoporosis, you should be offered medication. Your doctor will prescribe the most appropriate one for you.

There are many proven treatments available that can be used to treat osteoporosis – typically; they reduce the risk of fragility fracture by 30-50%. These medicines include bisphosphonates, hormone replacement therapy, teriparatide, and denosumab.

## Bisphosphonates

Oral bisphosphonates work by attaching onto the surface of your bones and making the cells that break down bone (osteoclasts) less active, so that the rate at which bone is removed decreases. The cells that build bone (osteoblasts) remain active, and continue to form new bone. This will maintain the skeleton you have, and gradually strengthen it over time.

In New Zealand the most commonly prescribed oral bisphosphonates are alendronate (Fosamax®) and risedronate. These two are taken as tablets weekly. They must be taken on an empty stomach, at least 30 minutes before food, to maximise absorption. They are to be taken with a full glass of water, and you need to stay upright for at least 30 minutes to minimise the risk of irritation of the oesophagus.

Oral bisphosphonates are a long-term medication, so you will generally take them for 4-5 years. After this, your treatment will be reviewed by your doctor and you will probably either continue the medication or be given a 'drug holiday'. You may be transferred to a different medication.

Alternatively, you could be offered a bisphosphonate infusion of zoledronic acid (Aclasta®). The advantage of the infusion is that it only needs to be administered every 12-24 months and avoids possible side effects involving the stomach and oesophagus.

About 30% of people will develop flu-like symptoms within a few days of the first dose. These symptoms can usually be reduced by taking paracetamol after the infusion. Non-steroidal anti-inflammatory drugs (NSAIDs), such as ibuprofen, can be added to or used instead of paracetamol if symptoms are severe. Post infusion reaction tend to significantly lessen or not occur again after the next infusion. Generally, a total of three zoledronic acid infusions are given before your treatment plan will be reviewed by your doctor.

## Hormone replacement therapy

If you're a woman with osteoporosis or a high fracture risk, and you're within 10 years of menopause (40 to 60 years), you may be offered hormone replacement therapy (HRT) as treatment. HRT is an oestrogen-based treatment that comes in various forms and preparations, generally tablets or skin patches. They work by reducing bone turnover, lessening bone loss. Your doctor can decide if HRT can be safely used according to your medical history.

## Teriparatide

Teriparatide (Forteo®) works by stimulating the bone building cells (osteoblasts) to lay down more bone. You must meet certain criteria to be offered funded teriparatide treatment.

The criteria includes having very low bone density on a DXA scan, and having suffered two or more fractures (with at least one occurring when you have been taking bone protection therapy (as described above) for longer than 12 months). Teriparatide is a daily injection under the skin (subcutaneous injection) which you will use for approximately 18 months.

## Denosumab

Denosumab (Prolia®) is a specially designed protein (monoclonal antibody) that powerfully suppresses the actions of bone removing cells (osteoclasts). This increases bone mineral density and prevents bone fractures. You must meet very strict criteria to be offered funded denosumab treatment.

It is given as an injection under the skin once every six months.

If you start taking denosumab, you need to make sure that you have another appointment booked for this six-monthly injection as it loses its effectiveness faster than other treatments mentioned above.

***It's essential that osteoporosis is diagnosed and treated properly to prevent fragility fractures. We're working to increase consumer awareness and improve systems of care across the country to achieve better bone health for all New Zealanders.***

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