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Medicines

Consumer guide

Understanding prescription medicines for osteoporosis

If you are diagnosed with osteoporosis or are at high risk of a fracture, your doctor will prescribe a medicine to strengthen your bones and help prevent fractures. These medicines have the effect of preventing further bone loss and in many cases will make the bones stronger over time.

Prescribed medicine plays an essential role in the management of osteoporosis. Your doctor will also ensure that you are getting adequate calcium, vitamin D and exercise to support your bone health and recommend lifestyle changes to help reduce your risk factors. While calcium, vitamin D, exercise and lifestyle changes are important these measures alone will not be sufficient to prevent further bone loss and fractures. You will need to take specialised osteoporosis medicine.

An estimated 1.2 million people in Australia have osteoporosis; many of these people take regular osteoporosis medicines to improve their bone health and reduce the risk of fractures. In many cases, but not all, these medicines are subsidised by the government under the Pharmaceutical Benefits Scheme (PBS).

Osteoporosis medicines

Bone is constantly 'turned over' – new bone is formed at the same time that older bone is broken down. In osteoporosis, the finely tuned balance between the production and breakdown of bone is lost and more bone is lost than is formed. Most osteoporosis medicines work by making the cells that break down bone (osteoclasts) less active, while allowing the cells that form new bone (osteoblasts) to remain active. The overall result is a reduction in bone loss and a gradual increase in bone strength (density) over a period of time.

There are a range of osteoporosis medicines available in Australia. Your doctor will determine the appropriate treatment for your situation and take into consideration any other medical conditions.

Osteoporosis medicines are grouped into 'classes' depending on their 'active ingredients.'

Bisphosphonates

Alendronate (brand name: Fosamax).
Taken as a tablet.

Risedronate (brand name: Actonel).
Taken as a tablet.

Zoledronic acid (brand name: Aclasta).
Taken by intravenous infusion.

Bisphosphonates can increase bone density by approximately 4-8% in the spine and 1-3% in the hip, over the first 3-4 years of treatment. Although these increases may appear to be small, they have a very positive effect on fracture rates. For example, bisphosphonates have been to shown reduce spinal fractures in people with osteoporosis by as much as 30-70% and in the hip by as much as 30-50%. A positive effect can be seen as early as 6-12 months after starting treatment.

Bisphosphonates are available on the PBS for both men and women with osteoporosis and fractures. They are also available to older people over 70 with very low bone density who have not fractured. In addition, they can be prescribed on the PBS to people who are taking corticosteroids (for example, prednisone or cortisone) at a dose of 7.5 mg for at least 3 months.

Most bisphosphonates are taken as tablets and come with specific instructions as to how they should be taken. Tablets may be taken as a daily, weekly or monthly dose

and may be provided with calcium tablets or calcium/vitamin D sachets to be taken on other days. It is important to follow your doctor's directions, to ensure you receive the most benefit from your tablets and to reduce your risk of side effects. For example, with all oral bisphosphonates it is very important to stay upright (not lie down) for at least half an hour after taking the medication, to reduce any gastric reflux (heartburn).

Most oral bisphosphonates are prescribed for several years. Your GP will monitor your progress during this time.

Zoledronic acid is given as a once yearly intravenous infusion (the drug is given directly into the bloodstream through a vein). This takes approximately 15 minutes and will be given by your doctor or practice nurse.

Please review the Consumer Medicine Information (CMI) provided with your prescription about the benefits and any possible side effects of your medicine. Ask your doctor or pharmacist if you have any questions.

Denosumab

(Brand name: Prolia). Given as an injection every 6 months.

Denosumab is another treatment for osteoporosis. It works in a different way to bisphosphonates but has the same effect of slowing the rate at which bone is broken down. Treatment with Denosumab can reduce spinal fractures by two thirds, and it has a significant effect on hip fractures and other fracture types.

Denosumab is available for women and for men when receiving certain medicines for prostate cancer. At present, denosumab is available on the PBS for men and women who have osteoporosis and a fracture, or for men and women 70 years or over who have very low bone density.

Please review the Consumer Medicine Information (CMI) provided with your prescription about the benefits and any possible side effects of your medicine. Ask your doctor or pharmacist if you have any questions.

Strontium ranelate

(Brand name: Protos). Taken as a sachet dissolved in water, at least 2 hours before or after food.

Strontium ranelate is absorbed into the bone in a very similar way to calcium. It both increases bone formation and reduces bone loss, resulting in denser, stronger bones, significantly reducing the risk of spinal fracture and also reduces the risk of other fractures in people with low bone density.

Strontium ranelate is approved for use in people who have had a fracture, but should only be prescribed by your doctor if you cannot take other other osteoporosis medications, such as bisphosphonates or densosumab. It is not available on the PBS.

People who have heart disease or vascular disease, or who are at risk of developing these diseases, should not take strontium ranelate. Other osteoporosis treatments are more suitable for people with these conditions.

Bone density tests (DXA scans) can give artificially high bone density readings after treatment with strontium ranelate – this will be taken into account by your doctor when monitoring its effects.

Please review the Consumer Medicine Information (CMI) provided with your prescription about the benefits and any possible side effects of your medicine. Ask your doctor or pharmacist if you have any questions.

Selective oestrogen receptor modulators (SERMS)

Raloxifene (brand name: Evista). Taken as a daily tablet.

Raloxifene acts very much like the hormone oestrogen in the bones, helping to reduce bone loss. It is most effective in reducing spinal fractures.

In addition, Raloxifene has been shown to reduce the risk of invasive breast cancer in post menopausal women when it is taken for more than five years, without increasing the risk of endometrial cancer.

Raloxifene is available on the PBS for postmenopausal women with established osteoporosis and a fracture.

Please review the Consumer Medicine Information (CMI) provided with your prescription about the benefits and any possible side effects of your medicine. Ask your doctor or pharmacist if you have any questions.

Hormone replacement therapy (HRT)

The active ingredient of HRT is the hormone oestrogen. Some HRT treatments also contain progestogen – this is known as combined HRT. Oestrogen is important for maintaining strong bones. Osteoporosis is more likely to develop when oestrogen levels fall during and after the menopause. HRT, even at low doses, helps to slow down the loss of bone, reducing the risk of osteoporosis and bone fractures.

HRT is of greatest benefit to women below the age of 60 who are at risk of fracture and are unable to take osteoporosis medications. It is particularly useful for women who have undergone early menopause (before 45 years of age); these women are at the greatest risk of osteoporosis.

Above the age of 60, the risk of heart disease, blood clots, stroke and breast cancer increases. HRT is thought to increase these risks; other osteoporosis medications are more suitable for women over 60.

Please review the Consumer Medicine Information (CMI) provided with your prescription about the benefits and any possible side effects of your medicine. Ask your doctor or pharmacist if you have any questions.

Teriparatide

(Brand name: Forteo). Given as an injection (self-administered) daily for up to 18 months.

Teriparatide is based on human parathyroid hormone. This treatment stimulates bone-forming cells (osteoblasts), resulting in improved bone strength and structure. In postmenopausal women who have had spinal fractures, Teriparatide reduces the risk of further spinal fractures, as well as other fracture types.

Teriparatide is restricted to those people who have tried other treatments but continue to have very low bone density and further fractures. It is prescribed only by specialists and is available for both men and women.

Once the drug course is finished, another osteoporosis medicine will need to be used so that the new bone produced by Teriparatide is maintained and improved.

Please review the Consumer Medicine Information (CMI) provided with your prescription about the benefits and any possible side effects of your medicine. Ask your doctor or pharmacist if you have any questions.

Tips for taking osteoporosis medicines

Be patient

It is likely that your bone loss has occurred over many years, so it will take some time to rebuild. The good news is that by using the right medication in the right way, you should stop losing further bone virtually straight away and can start reducing your risk of fracture.

Talk to your doctor

Discuss your progress regularly with your doctor. If you think you are experiencing a side effect from your osteoporosis medicine, it is important that you advise your doctor. In many cases, your doctor will be able to rectify the problem. Many people take regular osteoporosis medicines without any problems, but all medicines have the potential to produce side effects.

Take your medicine as directed

You will only gain the full benefit of your treatment if you continue to take your medicine as directed.

Be careful not to miss a dose. Many of these medicines will not be effective if you take them with food, or at the same time as other medicines or supplements. Your doctor or pharmacist can advise you about how your medication must be taken. Taking the medicine as instructed will also reduce your chance of experiencing side effects.

Have sufficient calcium and vitamin D

Most osteoporosis medicines have been shown to be more effective when taken with calcium and/or vitamin D supplements. For this reason, your doctor may also prescribe these supplements.

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