



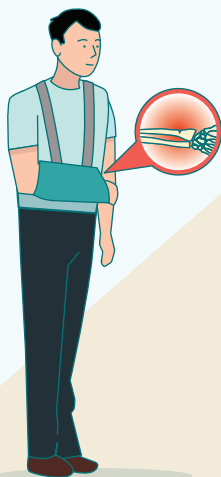
INJECTABLE TREATMENTS FOR OSTEOPOROSIS

WHAT IS OSTEOPOROSIS?

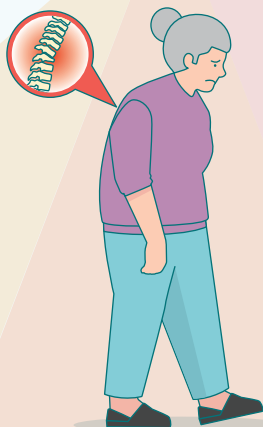
Bone is a living tissue that is broken down and renewed all the time. The renewal process slows with age, so it is normal for your bones to become weaker and less dense (bone loss) as you grow older. But some people **lose bone faster** than others, which makes bones weak and thin. This is known as **osteoporosis**, which is usually a **long-term** (chronic) condition that happens slowly over several years.

Most patients with osteoporosis experience **little to no** symptoms. They usually only find out that they have the condition after they **break** a bone (fracture). If the bones in the **spine** break, the body will be unable to support itself properly, leading to a **bent-forward** posture that may affect **balance** and **increase** the risk of falling.

Fractures due to osteoporosis commonly happen in the:



Upper limb



Spine

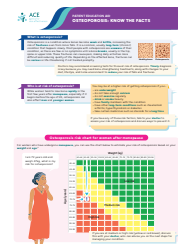


Hip

DID YOU KNOW?

Women have a higher risk of osteoporosis, but the condition can affect **anyone**, including **men**.¹

Learn more facts about osteoporosis [here](#).²



HOW TO PREVENT OSTEOPOROSIS AND FRACTURES?

Your risk of osteoporosis increases with certain factors such as being underweight, drinking or smoking heavily, having family members with the condition, not taking enough calcium, or not exercising regularly. If you are at risk of osteoporosis, you **can** reduce your fracture risk by **strengthening** your bones and **taking precautions** to prevent falls:^{3,4}



Strengthen your bones

Eat healthily and ensure you are taking enough calcium and vitamin D as advised by your doctor.

Quit smoking (if you smoke) and drink **less alcohol** (or avoid it entirely). Both activities cause bone loss.

Exercise regularly. It will improve your balance and strengthen your bones and muscles.

Reduce your fall risk

Avoid or drink **less alcohol**. Alcohol can affect your balance and reflexes, causing you to fall more easily.

Keep your home **safe**. Avoid trips and falls by wearing non-slip shoes, using non-slip mats in kitchens and bathrooms, ensuring all wires are tucked against the walls and removing any other trip hazards.

Go for regular **eye** and **hearing checks**. Keep your home well-lit so you can see clearly.

HOW IS OSTEOPOROSIS TREATED?

Some patients may be suitable for treatment with **drugs** to strengthen their bones. These treatments are available as oral tablets, or given as injections into the fat under the skin, or slow drips into the vein. Your **doctor** will assess your age, sex, risk of fractures, injury history, and **preferences** to advise which treatment is **suitable** for you.



Injectable drugs such as

- denosumab
- teriparatide
- romosozumab
- zoledronic acid

Did you know?

Denosumab, romosozumab and teriparatide are medicines that contain active ingredients made by living cells. These are called biological medicines or **biologics**.

Biosimilars are also biologics. [Click here](#) to learn more about them.⁵



WHAT DOES THE EVIDENCE FROM CLINICAL STUDIES SAY ABOUT INJECTABLE DRUGS FOR TREATING OSTEOPOROSIS?

ACE reviewed the available clinical evidence and received expert advice from doctors and patients about the use of injectable drugs to treat osteoporosis. ACE also negotiated the prices of these drugs with the companies.^{6,7,8}



Women

Denosumab, romosozumab, teriparatide, and zoledronic acid are effective treatment options for increasing the amount of minerals in bones (bone mineral density) or reducing the risk of fractures in **women**.

Men

Denosumab, teriparatide, and zoledronic acid are effective treatment options for **men** with osteoporosis.

SUBSIDISED INJECTABLE DRUGS FOR OSTEOPOROSIS

Subsidised (brand name)⁹

- ✓ Denosumab (Prolia)
- ✓ Zoledronic acid (all brands)
- ✓ Teriparatide biosimilar (Sondelbay)*

*For patients with severe osteoporosis who have had two or more fractures in their spine, or other bones due to osteoporosis.

Not Subsidised[^]

- ✗ Romosozumab
- ✗ Teriparatide (brands other than Sondelbay, such as Forteo)

[^]Not subsidised because their benefits do not justify their costs at the prices offered by the companies.^{7,8}

Treatment costs are subsidised by **40% to 75%** for eligible patients



KEY MESSAGES

Injectable drugs such as **denosumab, zoledronic acid**, and teriparatide biosimilar (**Sondelbay**) are subsidised for certain patients with osteoporosis, making them more affordable. The treatment that you need will depend on different factors such as your age, sex, risk of fractures, injury history, and preferences. Discuss with your **doctor** which treatment is suitable for you, and your concerns. You can also speak to a **medical social worker** if you need financial assistance for any treatments.

Sources

1. ACE Clinical Guideline on *Osteoporosis: diagnosis and management*, 15 August 2025
2. ACE Patient Education Aid on *Osteoporosis: know the facts*, 15 August 2025
3. www.healthhub.sg/well-being-and-lifestyle/active-ageing/keeping-bones-strong
4. www.healthhub.sg/well-being-and-lifestyle/active-ageing/tips-on-fall-prevention
5. ACE Patient Factsheet on *Biosimilars: A Safe, Effective and More Affordable Option for Patients*, 2025
6. ACE technology guidance for *Denosumab for treating osteoporosis and glucocorticoid-associated bone loss*, July 2022
7. ACE technology guidance for *Romosozumab and teriparatide for treating osteoporosis*, June 2025
8. ACE technology guidance for *Teriparatide biosimilar for treating osteoporosis*, June 2025
9. www.moh.gov.sg/managing-expenses/schemes-and-subsidies/list-of-subsidised-drugs



The Agency for Care Effectiveness (ACE) was established by the Ministry of Health (Singapore) to drive better decision-making in healthcare through health technology assessment (HTA), clinical guidance and education. It publishes guidances on diagnosing, treating, and preventing different medical conditions based on the latest research information available worldwide. This factsheet is not, and should not be regarded as, a substitute for professional or medical advice. Please seek the advice of a qualified healthcare professional about any medical condition. © Agency for Care Effectiveness, Ministry of Health, Republic of Singapore. All rights reserved. Reproduction of this publication in whole or part in any material form is prohibited without the prior written permission of the copyright holder.

Published on 29 Sep 2025. To find out more about ACE, scan the QR code or visit www.ace-hta.gov.sg. You can also follow us on social media at: [f](#) [in](#)