

Patient information from BMJ

Last published: Sep 20, 2021

Osteoporosis: what treatments work?

If you have osteoporosis your bones are weaker than they should be and can break more easily than is usual. It's most common among older women. So this information is mostly about women.

If you break a bone in your spine, hip, or wrist after going through the menopause, osteoporosis is the most likely cause. There are treatments that can slow down osteoporosis and help protect your bones.

What treatments work?

The aim of treatment for osteoporosis is to prevent broken bones.

There are several medicines you can take to keep your bones stronger for longer. There are also things you can do yourself to protect your bones, including taking regular exercise and eating well. Stronger bones reduce your chances of breaking a bone.

Things you can do for yourself

Healthy eating

The best way to prevent fractures is to keep your bones as strong and healthy as you can.

Healthy bones rely on you getting enough calcium and vitamin D. Bones are made up largely of calcium, and your body needs vitamin D to help you absorb calcium from food.

Good sources of calcium include dairy products like milk and yoghurt, and dark green vegetables like spinach.

Our bodies get most of our vitamin D from sunlight. But it can be hard to get enough, especially in the winter.

Calcium and vitamin D supplements

Taking calcium and vitamin D together may help keep your bones stronger. It's not clear how well these supplements work in preventing fractures, but doctors recommend them for people with osteoporosis.

Osteoporosis: what treatments work?

Taking calcium on its own probably won't help and is not recommended, because it can cause heart problems.

Take care not to take more than the recommended dose of vitamin D. Too much vitamin D can cause side effects including dizziness, fatigue, and even kidney damage.

If you have osteoporosis you should talk to your doctor before taking any supplements or before making changes to what you take.

Exercise

Weight-bearing exercise can help keep your bones strong. This means any type of exercise where you are putting weight on your bones, like walking and jogging.

Strengthening exercises like weight training can also help. Exercise may help you build up strong bones when you are younger.

Improving balance can also help you to avoid falls. Activities such as tai chi can help improve your balance.

Safety and avoiding falls

If you have osteoporosis it's really important to do whatever you can to avoid falls. Falling can make you more likely to break a bone. Here are some tips:

- Keep your floors free of clutter
- Wear shoes that fit well and support your feet
- Don't walk around in socks or stockings
- Have handrails on both sides of your stairs
- Use a rubber mat in your bath or shower
- Keep a torch by your bed for when you need to get up at night.

Medicines

The medicines most often used to treat or prevent osteoporosis are tablets called **bisphosphonates**. They help prevent fractures by slowing down the rate at which old bone gets broken down.

These drugs are usually taken as tablets. But some bisphosphonates can be given through an intravenous (IV) drip once a year.

Bisphosphonates can cause side effects in some people. For example, when taken as tablets they can irritate the tube that runs from your throat to your stomach (your oesophagus). This can cause discomfort and problems like ulcers in your oesophagus.

To make this less likely you should swallow the tablets whole, with a big glass of plain water, and stay upright for at least an hour after taking them.

Osteoporosis: what treatments work?

Bisphosphonates have also been linked to some more serious side effects, although these are rare. These include a bone disease in the jaw, irregular heart beat, stress fractures (caused by wear and tear on weak bones), and bone pain.

Other medicines for post-menopausal women

The main drug treatments for women who develop osteoporosis after the menopause are **bisphosphonates**. But there are other options.

Drugs called **selective oestrogen receptor modulators (SERMs for short)** are sometimes used to treat osteoporosis. They can help reduce the chance of fractures of the vertebrae (the bones in the spine).

SERMs can cause side effects in some people. They slightly increase your chances of getting blood clots and stroke. More common problems include hot flushes and leg cramps.

Drugs called **monoclonal antibodies** are now used in some countries for strengthening bones in women with osteoporosis. But it can cause side effects, including an increased chance of serious infection and damage to the bones in the jaw.

Medicines called **parathyroid hormone (PTH) receptor agonists** are sometimes used to help women with very weak bones or who have had several fractures, and who can't take bisphosphonates.

But, again, they can cause side effects. For example, using these medicines for too long can actually cause bones to become weaker. Your doctor will monitor you carefully if you take this treatment.

It used to be common for women to take hormone replacement therapy (HRT for short) after the menopause. HRT does help keep bones stronger after the menopause, but the benefits are no longer thought to outweigh the risks.

This is because HRT can slightly increase your chances of getting other serious health problems, such as breast cancer, a heart attack, a stroke, and blood clots.

HRT is now usually only recommended for women with severe osteoporosis who can't take other treatments.

Medicines for men

As with women, the main medicines used to treat osteoporosis in men are bisphosphonates.

But, as with women, some men have weaker bones for hormonal reasons. In particular, low levels of the hormone **testosterone** can cause bone weakness in some men.

We're not sure whether testosterone supplements can help strengthen bones and reduce fractures. But some doctors might suggest this as a treatment if your testosterone level is low.

As for women, monoclonal antibodies and PTH receptor agonists are sometimes used for men with very weak bones or who have had several fractures, and who can't take bisphosphonates. But these treatments may not be available everywhere.

Osteoporosis: what treatments work?

Osteoporosis caused by steroid medications

Many people take anti-inflammatory medicines called corticosteroids for various conditions, including severe asthma and some types of arthritis. But when people take them for a long time they can cause weaker bones.

It's recommended that people taking long-term corticosteroids should also take medications such as bisphosphonates to strengthen their bones, as well as calcium and vitamin D supplements.

If you need to take corticosteroids for more than a few months your doctor should talk with you about medicines for osteoporosis.

The patient information from *BMJ Best Practice* from which this leaflet is derived is regularly updated. The most recent version of Best Practice can be found at bestpractice.bmj.com. This information is intended for use by health professionals. It is not a substitute for medical advice. It is strongly recommended that you independently verify any interpretation of this material and, if you have a medical problem, see your doctor.

Please see BMJ's full terms of use at: bmj.com/company/legal-information. BMJ does not make any representations, conditions, warranties or guarantees, whether express or implied, that this material is accurate, complete, up-to-date or fit for any particular purposes.

© BMJ Publishing Group Ltd 2021. All rights reserved.

