

Drug treatments for osteoporosis: Parathyroid hormone treatment (teriparatide [Forsteo Movymia, Terrosa])

What is osteoporosis?

Osteoporosis occurs when the struts that form the mesh-like structure inside bones become thin. This causes the bone to become fragile and break easily, even after a minor bump or fall. You might hear these breaks described as 'fragility fractures'. The terms 'fracture' and 'broken bone' mean the same thing.

Fractures can occur in many parts of the body, but they are most common in the wrists, hips and spine. It's these broken bones that can cause pain, rather than osteoporosis itself. Spinal fractures can also cause height loss and a curved spine.

What is parathyroid hormone?

Parathyroid hormone is naturally produced by the body to help with the regulation of calcium. It is used to reduce the risk of broken bones in people with osteoporosis. It is given as a daily subcutaneous injection (a small injection under the skin).

Why do I need a drug treatment for osteoporosis and how does parathyroid hormone treatment work?

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. They do not help the pain that occurs when bones break.

Bone is constantly being broken down (resorption) and rebuilt (formation) by specialist bone cells. Osteoporosis occurs when this process becomes out of balance and more bone is broken down than is rebuilt. Parathyroid hormone treatment acts to increase bone formation and thereby helps strengthen bone and reduce the risk of broken bones.

Is my doctor likely to offer me parathyroid hormone treatment?

If you have had several vertebral compression fractures and are at risk of further broken bones your doctor may offer you parathyroid hormone treatment especially if you have already tried other drug treatments. The treatment will initially be prescribed by hospital consultants with nursing support in the community because this treatment must be given by injection. Parathyroid hormone treatment is more expensive than other treatments. Decisions regarding who may be suitable for this treatment may be affected by local, national and National Institute for Health and Care Excellence (NICE) guidelines.

Which products contain parathyroid hormone?

Teriparatide (Forsteo, Movymia, Terrosa)

Dose	20 micrograms subcutaneous injection (under the skin) given daily for a maximum of 24 months
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Licensing details	F M GIOP S
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Key:

F = Post-menopausal women, **M** = Men

S = shown to reduce the risk of broken bones in the spine

H = shown to reduce the risk of a broken hip

GIOP = shown to reduce the risk of broken bones in people who have osteoporosis caused by glucocorticoid ("steroid") medication.

A licensed drug has been checked for safety and effectiveness and can be prescribed by a doctor for a specific condition.

Sometimes an unlicensed drug will be given at the discretion of your doctor eg those licenced specifically for women may be prescribed for men.

How can I get the most out of my drug treatment?

1. Be informed

Find out about your drug treatment so that you can be involved in decisions being made and you will know what to expect. Talk to your doctor and/or contact the Helpline at the Royal Osteoporosis Society if you have any questions or concerns. Ask your doctor for a copy of the Patient Information Leaflet which describes how the drug is given and the possible side effects.

It is important that you gather as much information as possible and discuss any worries you may have prior to having the first injection.

2. Make sure you take (and store) the treatment correctly

Following the instructions for storing and giving yourself your parathyroid hormone treatment will ensure that it will have the most benefit for your bones.

Parathyroid hormone treatment is a subcutaneous injection that you give to yourself on a daily basis, preferably at the same time each day. You may be prescribed one pen/ cartridge at a time or in multiple packs (this may depend on availability in your area or on the product you've been prescribed).

Teriparatide as Forsteo is supplied in a pre-filled syringe pen, similar to a diabetic injection pen with a very fine needle. This pen should last for 28 days.

If you are prescribed this treatment, a healthcare professional such as a nurse will instruct you or your carer on how to use the injection pen. You will also be given a telephone number you can call to get support and information on issues such as giving yourself the injection and storing your medicine.

Teriparatide needs to be stored in a refrigerator when not in use and a new needle is required for each injection. A special travel bag with compartments for frozen gel packs can be obtained by calling the support number. This bag enables you to keep your medication out of the fridge for up to 36 hours.

3. Continue to take your treatment regularly for the correct length of time

Parathyroid hormone treatment is usually taken for two years, so it's important that you are happy with the treatment. Although it is important that you take the treatment as instructed, missing the odd

injection will probably not have an impact on your bone health in the long run, but you should avoid this if you can.

After completing your treatment with parathyroid hormone, your doctor will discuss with you what treatment to switch you to for your osteoporosis. They will be able to advise you on what is best for you, based on your individual circumstances.

4. Make sure parathyroid hormone treatment is for you

If you have one of the following, parathyroid hormone treatment may not be appropriate for you and you will need to discuss alternatives with your doctor:

It should not be used if:

- You have had a previous allergic reaction to parathyroid hormone treatment.
- You have high blood calcium levels known as hypercalcaemia.
- You have severe kidney or liver problems.
- You have another bone disease, e.g. Paget's disease
- You have had radiation therapy to the skeleton.
- You are pregnant or breast feeding (although only licensed for post-menopausal use, occasionally it may be prescribed by specialists for younger women).

5. Lead a healthy lifestyle to keep your bones strong

Factors that can help to maintain healthy bones are a well-balanced diet with adequate calcium rich foods, safe exposure to sunlight to obtain vitamin D, regular weight bearing exercise, avoiding smoking and keeping alcohol consumption within the recommended limits.

If you have been diagnosed with osteoporosis and are taking a drug treatment, you may need to boost your calcium intake up to around 1000mg a day. Your doctor can prescribe supplements of calcium and/or vitamin D if you need them.

6. Understand the risk of side effects and what can be done to reduce them

As with any drug, there are potential side effects with parathyroid hormone treatment. It is important to remember that:

- Most people will not experience side effects or, if they do, they are short lived.

- Not all the symptoms you may read about online or in the patient information leaflet are caused by the drug. Symptoms reported by patients taking part in research trials may be listed as possible side effects, even if they were seen in as many people who took the placebo (dummy treatment) as those taking the drug. So, some common conditions are often reported in this way and people may think they are due to their treatment. We can only be sure that such symptoms are likely to be caused by parathyroid hormone if they were seen in more patients using parathyroid hormone than on the placebo. The symptoms described on this page are those considered to be “true side effects”.

If you are taking medications for other conditions it is important to establish that it is not these that are causing your side effects. Talk to your doctor who may be able to suggest ways of investigating this further.

If you experience these or any other symptoms which you think may be due to this medicine, speak with your doctor or pharmacist about other treatment options.

As more research findings become available more symptoms may be found to be “true side effects”, so information could change in the future.

Getting more information and support

We hope this fact sheet will help you feel more informed and more confident when discussing your bone health with your medical team.

For more information about osteoporosis and bone health, including fact sheets on all available drug treatments, visit our website at theros.org.uk/info or order more of our printed publications.

If you need more information or support, talk to your healthcare professional.

You can also call our specialist Helpline nurses with any questions or concerns about bone health, for free, on **0808 800 035**, or email them at nurses@theros.org.uk

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This information is based on the latest evidence and clinical practice. It should not replace advice from your own healthcare professionals.

To give us feedback on this fact sheet, email us at health.info@theros.org.uk

We provide our information free of charge. To make a donation or become a member, visit theros.org.uk or call **01761 473 287**.

Potential side effects	How common is it?	What can I do to reduce side effects or the risk of them occurring?
Arthralgia (joint pain)	10 in 100 in the treatment group compared to 8 in 100 in placebo group.	These may be an initial response that improve as your body adjusts to the medicine. Sometimes changing the time you have it e.g. moving it from morning to evening may help. Occasionally these may be longer lasting in which case speak to your doctor about other treatment options.
Headache	8 in 100 in the treatment group compared to 7 in 100 in the placebo group	
Dizziness	8 in 100 in the treatment group compared to 5 in 100 in the placebo group	
Depression	4 in 100 in the treatment group 3 in 100 in the placebo group	

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.



To view or order more information about osteoporosis and bone health:



theros.org.uk/info



01761 471 771



info@theros.org.uk

To contact our specialist nurses:



0808 800 0035



nurses@theros.org.uk