



# Hormone replacement therapy (HRT) and bone health

Hormone replacement therapy (HRT) is medication used to help manage symptoms of the menopause and to strengthen bones. It can help to prevent osteoporosis in the years around the menopause, especially if you have an early menopause. It can also be a good choice if you need treatment for both osteoporosis and menopausal symptoms.

HRT is safe and effective when it's prescribed in the right way for the women who need it. HRT is usually started before the age of 60. As you get older than this, the risks may start to outweigh the benefits. It's important to discuss your own benefits and risks, and the best length of treatment for you, with your doctor, so you can decide what's right for you.

## Who is this fact sheet for?

This information may be helpful if you:

- are going through the menopause and looking for ways to protect your bone health
- have been diagnosed with osteoporosis – or told you have a high risk of fractures (broken bones) – and want to know if you should choose HRT to treat this
- are taking HRT to relieve menopause symptoms and want to know if it will protect your bones too
- are confused by all the media stories about HRT and wondering if it is safe.

## It includes the following information:

- What is osteoporosis?
- What is the menopause?
- How does menopause affect the bones?
- What is hormone replacement therapy (HRT)?
- Can HRT help prevent or treat osteoporosis?
- Is HRT right for me?
- What HRT products are there?
- How can I get the most out of my HRT?
- What are the possible side effects?
- More serious side effects
- Getting more information and support

### 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 the menopause?

Menopause is the time in a woman's life when ovaries stop producing the amount of hormones needed for pregnancy. You are described as having completed your menopause (or being 'post-menopausal') when you haven't had a menstrual period for at least one year. The average age for this to happen is 51 years.

Around the menopause, the level of the female sex hormone oestrogen can vary for a time and then eventually decreases. This causes many women to have symptoms such as hot flushes and sweats.

The process of going through the menopause is often described as the 'perimenopause'. It usually happens gradually and can last for several years. You may get symptoms at any time during the perimenopause, and sometimes for many years after.

You might have blood tests to monitor your hormone levels to confirm you're going through the menopause – especially if you're younger than average.

Some women have an 'early' menopause, before the age of 45. If menopause happens before the age of 40, it may be called premature or primary ovarian insufficiency. This can happen naturally, or after surgery to remove your ovaries. Early menopause can also be triggered by chemotherapy or radiotherapy for other conditions. The treatment can cause a sudden drop in hormones and symptoms may be more severe.

## How does menopause affect the bones?

The inside of our bones is constantly being broken down (resorption) and rebuilt (formation) by specialist bone cells. This process is called bone remodelling and helps to keep bones healthy and strong.

During the menopause, the decrease in your level of oestrogen causes this process to become out of balance. More bone is broken down than formed, leading to bone loss.

Bone loss happens more quickly for a few years around the time of menopause. You then continue to lose bone at a slower rate as you get older. Over time, you may develop osteoporosis and a higher risk of breaking bones in later life. This is particularly likely if you have an early menopause (before the age of 45).

## What is hormone replacement therapy (HRT)?

HRT is medication that mimics the female hormones, oestrogen and progesterone. Oestrogen is often prescribed to relieve menopausal symptoms, and to either prevent or treat osteoporosis. Progesterone (a man-made version of progesterone) is given to protect the womb.

HRT usually combines both hormones. This is because oestrogen taken on its own could make your womb lining too thick and increase your risk of womb cancer. But if you've had surgery to remove your womb (a hysterectomy), you'll only need to take oestrogen.

HRT is available in many forms including tablets, skin patches, implants and gels. Progesterone is also available via a 'coil', which is a contraceptive device placed through your cervix and into your womb by a doctor.

## Can HRT help prevent or treat osteoporosis?

HRT causes your oestrogen levels to increase. This can help to prevent bone loss and reduce your risk of developing osteoporosis and of breaking bones.

If you already have osteoporosis or a high risk of breaking bones, HRT can help to strengthen your bones and make fractures less likely.

### Is HRT as effective as other osteoporosis drugs?

There haven't been many studies comparing HRT with other osteoporosis drug treatments. But it's thought that HRT probably reduces the risk of breaking a bone by a similar amount to other osteoporosis medications, including bisphosphonates.

## Is HRT right for me?

It's very important to consider taking HRT if you reach menopause early. This is because you will start losing bone at an earlier age than the average woman, increasing your risk of osteoporosis and broken bones.

If you've had an early menopause, talk to your healthcare professional about taking HRT, at least until you are about 50.

Many women take HRT to treat physical or emotional symptoms caused by the decrease in oestrogen levels during menopause. Symptoms can include tiredness, hot flushes, vaginal dryness, reduced libido (desire for sex) and mood swings. Even if your main reason for taking HRT is to relieve these symptoms, you can be reassured that you'll also be helping your bones.

HRT is also an option after the menopause as an osteoporosis drug treatment. It's particularly helpful for women needing a bone-strengthening medication who also have menopausal symptoms.

The decision about which osteoporosis treatment to use will depend on lots of things, including your own level of fracture risk, whether you've already broken a number of bones, your age, and your own needs and preferences. You'll need to speak with your healthcare professional about the most suitable treatment for you.

Like any osteoporosis drug, HRT won't reduce the pain caused by broken bones. But there are other medications and treatments that can help with pain.

## What HRT products are there?

There are more than 50 different HRT products available for prescription in the UK, but they aren't all used to treat osteoporosis. HRT products include tablets, patches that you stick on your skin, small implants that are placed under the skin, and gels you rub on your skin.

There are also rings, creams and pessaries (small removable devices) that can be placed inside the vagina to treat symptoms such as vaginal dryness. But these won't strengthen your bones, as they use very low levels of oestrogen.

HRT comes in the following three forms. Your healthcare professional should explain which form is most suitable for you and why.

### Sequential combined therapy

You take oestrogen every day and progestogen for around 12 days per month. The progestogen causes you to have a bleed like a menstrual period.

### Continuous combined therapy

You have both oestrogen and progestogen every day, so you won't have periods. The progestogen stops your

womb lining from getting too thick. You need to be at least a year past your last period before having continuous combined therapy, or it may cause irregular bleeding.

### Oestrogen-only HRT

This doesn't contain any progestogen. You can have oestrogen-only HRT if you've had an operation to remove your womb (a hysterectomy). You won't have any periods.

## Other types of HRT

### Regulated bio-identical hormones

These medications, often called body-identical hormones, are designed to be identical to the hormones we produce naturally. An example is micronised progesterone. Some clinicians prescribe this with oestrogen, instead of standard progestogen, as it's less likely to cause side effects or increase risks of blood clots and stroke. It may also be less likely to increase the risk of breast cancer.

There isn't as much research about these newer products, which is why many doctors still prescribe standard progestogen.

### Unregulated bio-identical hormones

These are different to the regulated products mentioned above. Although they claim to be more natural, they haven't been tested in the same way as regulated products to prove they work and are safe. They aren't recommended and they aren't available on the NHS. It's important to remember that just because a product says it is 'natural', this doesn't automatically mean it is safe or effective.

### Tibolone (Livial®)

This is taken as a tablet once a day. It's similar to taking combined HRT, but contains the ingredient tibolone, rather than oestrogen and progestogen. Tibolone mimics oestrogen, progesterone, and the hormone testosterone inside the body. It can be used if you completed your menopause over a year ago. It may be helpful for libido and bone strength.

The Women's Health Concern website has more information about all of these treatments.

## How can I get the most out of my HRT?

### Be informed and discuss with your doctor whether HRT is right for you

Gather information and discuss any questions or concerns you have. For many women, HRT will be a useful option. But HRT may not be right for you if you've previously had a blood clot, breast, ovarian or womb cancer, heart disease, untreated high blood pressure, or liver disease.

### Make sure you understand your treatment dose and monitoring

HRT as a tablet, patch or gel will usually help with bone strength, even if you're having a low dose such as 1mg oestradiol. But you may need a higher dose, such as 2mg, if your menopausal symptoms are severe or aren't improving.

You won't need regular blood tests to check your oestrogen levels while you're taking HRT. You probably won't need regular bone density scans either, even if you're taking HRT to help strengthen your bones. However, your healthcare professional may recommend regular scans if you have a high risk of breaking bones.

You should have a medication review about once a year, to make sure HRT is still the right choice for you. Make sure you mention any side effects you're getting. It's important to understand the possible side effects and ways to reduce them.

### How long will I stay on HRT for?

You can keep taking HRT as long as the benefits outweigh any risks. Some women stay on HRT for several years. How long you take HRT for will depend on your own situation – talk to your doctor about this.

When you stop taking HRT, the beneficial effect on your bones will begin to decrease straight away. If you still have an increased risk of breaking a bone, your doctor will probably recommend you start a different type of osteoporosis drug treatment. Or they may suggest you have a bone density scan or other tests.

### Lead a healthy lifestyle to keep your bones strong

The following things can help:

- a well-balanced diet with lots of calcium-rich foods
- safe exposure to sunlight to ensure your body makes enough vitamin D
- vitamin D supplements, if you need them
- regular weight-bearing and muscle-strengthening exercise
- avoiding smoking
- staying within recommended alcohol limits.

### Calcium and vitamin D

If you decide to take HRT, or a different medication for osteoporosis, aim for a calcium intake of around 1,000mg a day to ensure you're getting enough. Your doctor may prescribe supplements of calcium and vitamin D if you can't get enough from your diet.

## What are the possible side effects?

As with any drug, HRT can cause side effects. But most people don't get any side effects. And if you do get side effects, they won't usually last for very long.

The table below has information on the most common side effects of HRT.

For a full list of possible side effects, look at the patient information leaflet that comes with your HRT.

| Possible side effect                              | How common is it?     | How can I reduce my risk or relieve it?                                     |
|---|-----------------------|---|
| Breast enlargement and tenderness                 | 1 in 10 to 1 in 100   | Eating a low-fat, high-carbohydrate diet may reduce breast tenderness       |
| Breakthrough bleeding                             | 1 in 10 to 1 in 100   | Discuss changing to a different type of HRT                                 |
| Leg cramps  | 1 in 10 to 1 in 100   | Regular stretches and exercise may help                                     |
| Stomach upset, feeling sick (nausea) and bloating | 1 in 10 to 1 in 1,000 | Take your tablet with food, which may help to reduce nausea and indigestion |

It's important to understand that many of the problems listed in the patient information leaflet aren't actually side effects of HRT. When a new medicine is being tested in clinical trials, the researchers have to record anything unusual that the patients in the study report. In some cases, a problem may have been just as common in people taking a placebo (dummy treatment) as in people taking the trial drug – meaning it wasn't caused by the drug itself.

If you do get any side effects that don't go away, it may help to:

- make sure the problem isn't caused by any other medication you are taking
- talk to your doctor, who may be able to help find out what is causing the problem
- ask your doctor or pharmacist about other types of HRT that may suit you better.

Man-made progestogen can cause side effects, such as low mood and stomach cramps. These can be reduced by using a version that's more similar to natural progesterone, such as dydrogesterone.

### More serious side effects

As with all medications, HRT has both benefits and risks. The benefits of HRT usually outweigh the risks. Current evidence says that the risks of serious side effects from HRT are very low. We describe some of the possible risks below.

- Many types of HRT are linked with a small increase in breast cancer risk. The longer you use HRT the more the risk increases. Research has shown that oestrogen-only HRT has little or no effect on the risk of breast cancer.
- Some HRT tablets can increase the chance of developing blood clots, but this risk is low. Oestrogen given through the skin as a patch, gel or spray does not increase the risk of blood clots.
- HRT tablets are linked with a small increase in stroke risk. But this risk is low, especially if you start HRT before the age of 60. There is no evidence that HRT patches, gels and sprays increase your risk of stroke.
- Research has shown that HRT does not increase the risk of heart disease.

The risk of serious side effects is small but does vary from one person to another. It depends on things such as your age, weight, medical and family history. For example, as you reach your 60s, the overall risks of starting HRT may outweigh the benefits. This is because the risk of the health problems mentioned above increases naturally with age, and taking HRT could add to this risk.

It's important to discuss your own personal benefits and risks with your doctor. They help you decide if HRT is the right treatment for you, as well as which type to use and how long to use it for. Regular review of treatment choices is also important.

**In general, HRT is safe and effective when used in the right way, by the women who need it.**

#### HRT in the news

You may have seen news stories about HRT, and feel confused about its safety. Remember that news stories aren't always accurate or balanced.

Experts regularly review the safety and use of treatments. If official guidance on HRT changes, we'll update our information at [theros.org.uk/info](https://www.theros.org.uk/info). You can also find reliable, up-to-date information on the NHS website, or on other websites such as Women's Health Concern and Menopause Matters.

## Getting more information and support

We hope this fact sheet will help you feel more prepared 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](https://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 or living with osteoporosis, for free, on **0808 800 0035** or email them at [nurses@theros.org.uk](mailto:nurses@theros.org.uk)

You may also find the following organisations helpful:

**Breast Cancer Now**  
[breastcancer.org](https://breastcancer.org)  
0808 800 6000

**British Heart Foundation**  
[bhf.org.uk](https://bhf.org.uk)  
0300 330 3311

**British Menopause Society**  
[thebms.org.uk](https://thebms.org.uk)

**Macmillan Cancer Support**  
[macmillan.org.uk](https://macmillan.org.uk)  
0808 808 0000

**Menopause Matters**  
[menopausematters.co.uk](https://menopausematters.co.uk)

**NHS website**  
[nhs.uk](https://nhs.uk)

**Women's Health Concern**  
[womens-health-concern.org](https://womens-health-concern.org)



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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](mailto:health.info@theros.org.uk)

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

 [theros.org.uk/info](https://theros.org.uk/info)

 01761 471 771

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