



What is HRT?

Hormone replacement therapy

The symptoms of the menopause are caused by fluctuating and then falling levels of ovarian hormones. HRT is a combination of one, two or all three of the main ovarian hormones; Estrogen (always), Progestagen (usually) and Testosterone (sometimes) taken in an effort to balance and supplement your own hormones levels. It may be made up of tablets or patches, gels and sprays and vaginal pessaries.

What you require, what is safest for you, how you might prefer to use it and what it may cost will all be taken into account when choosing a HRT for you.

Are there risks?

Yes, but thankfully for almost all people under 60 years of age, those risks are rare and in general, the benefit of using HRT outweighs those risks. See “**risks of HRT**” below.

What hormones do we use?

Estrogen is the main female sex hormone. It is the key hormone of HRT. It is produced in the ovaries and is essential for a normal menstrual cycle, puberty and reproduction. It has many non-reproductive effects in that it helps maintain cardiovascular, brain and bone health. It is crucial for the integrity of collagen production and maintenance. There are various molecular forms of estrogen released by the human ovary including E1 (estrone) E2 (estradiol) and E3 (estriol). Most HRT combinations use E2 estradiol, which is the predominate estrogen in the blood during the fertile years.

Oral vs Non oral Estrogen in HRT

How do we decide which estrogen to use and how to take it? Some types of estrogen are available in patches, gels, sprays and creams while others come in tablets. In other countries, there are even more options (there is an estrogen releasing vaginal ring in the UK). Tablet estrogen is generally cheaper to buy and most pharmacies will have them in stock but when sex hormones are swallowed, they go through the liver in what is known as **First Pass Effect** before they reach the main blood supply. The oral estrogen is metabolised in the liver and can be linked to more HRT-related side-effects and risks than estrogen that is delivered directly through the skin or vagina and into the main blood supply.



Avoiding first pass metabolism is often beneficial when compared to taking estrogen orally as it:

- Avoids non-absorption in people with GI absorption problems.
- Does not alter coagulation factors and so is not linked to an increase risk of blood clots (thrombosis) or stroke.
- Can lower triglycerides.
- Does not increase in blood pressure.
- Has less impact on blood sugar and thyroid hormones.
- May have less impact on headache and migraine.

But for most women who are otherwise fit and well, oral estrogen may be a convenient, inexpensive and a safe choice.

Progestagen is another important ovarian hormone. It plays a key role in the menstrual cycle and period regulation not to mention supporting pregnancy. Its main function in HRT is to protect the lining of the womb from the effects of the HRT estrogen. Estrogen causes womb lining thickening and cellular change - these are necessary in preparation for pregnancy. With HRT use, we want to keep the womb lining stable and thin – this is the progestagen’s main job.

HRT estrogen must never be used for any length of time without some other hormone - usually a progestagen - to prevent womb lining development. Left unchecked, estrogen used on its own can cause a womb lining cancer. If you do not have a womb (hysterectomised) you usually do not take any progestagen.

How do we decide which progestagen to use and how to take it?

Progestagens are available in many forms too. Some are blended together with an estrogen in patches, some come as tablets that can be swallowed or inserted vaginally, many people use the progestagen-bearing intrauterine device (coil) known as “Mirena” for the progestagen of their HRT. How you choose to blend in the progestagen, when you take it and for how many days each month will all depend on where you are in your own cycles, your age, your desire for pregnancy and other health issues.

Price can be a problem with HRT for some people although almost all forms are covered by the Medical Card and Drugs Payment Schemes. Most HRT products use synthetic progestagen (Progestins they are called) and while very effective at protecting the womb lining and usually very affordable, they might give rise to side effects for some people. Micronised progesterone on the other hand, is often offered as part of the HRT cocktail. It is a natural, gentler



progestogen. It is thought to be less likely to have a negative impact on the cardiovascular system as well as being less likely to cause progestagen-related side-effects such as bloating and headache. It is unfortunately more expensive than other progestogens and is usually not available in a patch or pill HRT cocktail, so you need to use it separately from your estrogen.

Should I take the progestagen every day or only for some days each month?

HRT is designed to either make you bleed or not make you bleed - depending on how you use the progestagen. There are pretty strict guidelines about when to use a “period creating” blend of estrogen and progestagen vs. when to use a “no period” blend of estrogen and progestagen. Sadly, you can’t pick and choose! HRT will not turn off your cycles, so if you have been having periods in the last year or two, you will probably be better off on a “period creating” blend of HRT. If you were to try a “no period” blend of HRT and your own ovaries were still able to cause periods, you could get really heavy and unpredictable bleeding, which we aim to avoid.

“Period Creating” HRT blends are also known as **CYCLICAL HRT** - This involves taking your estrogen all the time, no breaks - but using your progestagen for only 10-14 day per month. The withdrawal of the progestagen during the days you don’t take it, allows the womb lining to shed and if there’s anything built up in there, you will bleed.

“No period” HRT blends are also known as **CONTINUOUS HRT** - This involves taking your estrogen all the time, no breaks - while also using your progestagen all the time, every day, no breaks. If your own womb lining is thin and dormant, taking the progestagen in this way will not allow any bleeding and you should remain period free. Even people on this blend may bleed when they first start their HRT but it should settle on its own or if necessary with the addition of extra progestagen or a stronger progestagen (or even a Mirena coil).

Testosterone - is another important ovarian hormone for females. It plays a role in sexual desire and arousal, the strength of your bones and cognitive ability. Some of the testosterone found in the blood stream of females comes from their ovaries, some from their adrenal glands. Testosterone decline is more likely to cause significant symptoms in younger people with POI and is particularly problematic when the ovaries are surgically removed (oophorectomy).

Testosterone HRT is available as a gel, which can be imported from Australia. It can be very costly so many doctors are happy to prescribe a testosterone gel that is normally meant to be prescribed for male patients (using a medicine that is designed for something else is known as an “unlicensed use of a licensed medical product”).



We warn the menopausal patients to use male testosterone gel in tiny doses. When used in the correct amounts, testosterone it is unlikely to cause side effects but we recommend HRT testosterone users have their blood levels checked yearly because used incorrectly, testosterone hormone can cause excessive body hair growth, thinning scalp hair, enlargement of the clitoris and vocal cord changes - so best to keep testosterone levels monitored.

Local, Vaginal Estrogen - not everyone on the usual HRT will find it improves the symptoms of the lower urinary and vaginal areas. The decline in the number of blood vessels that supply the uro-genital tract can result in hormone deficiency symptoms in the vulva, changes in the vaginal wall, changes in the bladder and pelvic floor. It is not unusual for menopausal patients to be affected by a dry, thin, less lubricated and uncomfortable vagina. The new term for all these symptoms is Genito-Urinary Syndrome of the Menopause (GUSM).

Low dose vaginal estrogen should relieve the symptoms of GUSM.

Vaginal estrogen is available as a small pellet on a dispenser (E2- estradiol) or as a cream or in a waxy, vaginal pessary (E3-estriol). You can choose to use vaginal estrogen on its own if you only have vaginal symptoms but most people use local vaginal estrogen with their systemic HRT blend. It is not an “overdose” to use both oral/ patch/ gel HRT and a vaginal estrogen!

The products may be costly but are usually covered by the Medical Card and Drugs Payment Schemes. You may need quite a bit of vaginal estrogen at first to set things right and regain your vaginal health - usually a daily dose for the first 2 - 3 weeks and then much lower doses can be used thereafter. As with all forms of HRT, many guidelines will say “lowest effective dose for the shortest duration of time” when it comes to HRT- but this is decided by you, not the doctor. It is not wise to stop and start local vaginal HRT. You can remain on local vaginal estrogen for as long as you need it.

Serious Risks of HRT

Are thankfully very rare. For the vast majority of symptomatic people under 60 years of age, the risks of HRT use are far outweighed by the benefits of use. There are some serious side effects linked to the use of some forms of HRT and you need to know about these.

Breast cancer diagnosis (but not mortality) was found to be slightly more common in people on estrogen plus progestogen HRT if it was used for more than 4-5 years (see the WHI Study).



The numbers are reassuringly low and similar to the number of extra breast cancers found in females who drink more than 2 units of alcohol a day.

Cardiovascular and Cerebrovascular disease risk can be reduced in people on HRT when they start at a young age but if you start your HRT; particularly oral estrogen HRT, more than 10 years after your last period, and you are over 60, there may be an increase in estrogen associated thrombosis, which can lead to heart attack and stroke.

Ovarian cancer (certain types only) diagnosis was found to be slightly higher in people taking HRT with about 1 extra case of ovarian cancer for every 1000 people on HRT.

Dementia - there has been conflicting evidence about the risk of dementia and using hormones. HRT is unlikely to increase the risk of dementia if you start it under the age of 60 years and there is some evidence to suggest it may protect against vascular dementia.

Other Problems with HRT

Minor side effects (that is non-life threatening side effects) can happen to anyone when they try a new medication. Some are directly linked to the drug(s) themselves, some are linked to trace products in the pills or adhesives in the patches and some side effects may be more linked to the worry of using a new medication rather than the drug itself.

Common hormone side effects from HRT use are:

Nausea - can be from either the estrogen or the progestagen of your HRT and usually only happens only when you first start. It can be improved by taking your hormones in a different way or lowering the dose.

Headache - can be from either the estrogen or the progestagen and as above is usually dealt with by adjusting the dose or the delivery system (oral vs through the skin) of your HRT.

Breast discomfort – again can be related to either the estrogen or the progestagen of your HRT and usually settles on its own over time.

Other well recognised HRT side effects include: Leg cramps, bloating, PMS effects and mood changes. These all can be just monitored if not too severe and often settle over time. If you are experiencing dramatic side effects, you can always just stop the HRT and contact the doctor or nurse to discuss your options.



Period disruption - It is very common to get irregular, even heavy bleeding when you first try HRT. This is usually caused by an imbalance between the type and dose of estrogen vs the type and dose of progestagen in your blend. It usually finds its own balance eventually but if the bleeding is very heavy or too disruptive we may need to change the products you are using.