

INFORMATION ABOUT FEMINISING HORMONE THERAPY

Please read this document before your hormone therapy consultation. We will consider the likely individual costs, benefits, and risks of hormone therapy as they may apply to you and your situation during the consultation.

Introduction

Feminising hormone therapy helps you develop a more feminine and/or less masculine physique. The medications used for feminising hormone therapy in England are unlicensed for this purpose. These medications, therefore, are recommended and prescribed based upon currently available research evidence, authoritative clinical guidelines, and the judgment of a gender specialist endocrinologist or nurse.

General risks and limitations of feminising hormone therapy

The side-effects and safety of feminising hormone therapy are not completely known. There may be long-term risks that are not yet known.

You should take medications as prescribed. Taking more medicine than that prescribed will not make changes happen more quickly or effectively but will increase health risks.

Feminising hormone therapy may cause physical changes that other people will notice; some people have experienced harassment, discrimination, and violence and lost loved ones because of this.

Feminising hormone therapy may not produce the type and level of change that you hoped for. You may therefore continue to experience dysphoria and any associated negative effects.

How is estrogen taken?

There are several preparations of estrogen available including oral tablets, transdermal gels and patches and implants. Tablets are most frequently offered to younger patients in good physical health. Gels and patches are generally offered to patients who are aged over 40, have type 2 diabetes, and/or may have risk factors for Venous Thromboembolism (VTE), or cardiovascular disease (CVD), including a body mass index of 30 or more. Implants are rarely used.

Who should not take estrogen?

Estrogens should not be used by anyone who has ever had an estrogen-dependent cancer; the commonest types of estrogen-dependent cancer are breast cancer and endometrial (uterine) cancer.

Estrogens should be used with caution and only after a full discussion of risks with a specialist endocrinologist or nurse if you have:

- had blood clots that could or did travel to the lungs (pulmonary embolism)

- a strong family history of breast cancer or other cancers that grow quicker when estrogens are present
- diabetes
- eye problems, such as retinopathy
- heart disease, heart valve problems, or a tendency to develop blood clots
- hepatitis
- high cholesterol
- kidney or liver disease
- migraines or seizures
- obesity
- smokes cigarettes

You are strongly advised to stop smoking before starting hormone therapy.

Physical Changes

It can take several months or longer for the effects of estrogen to become noticeable. We cannot predict how fast, or how much, change will happen.

Permanent changes

You will probably experience noticeable breast growth, but it can take several years for breasts to reach their full size. Your larger breasts will remain even if you stop taking your treatment.

Temporary changes

The following changes will occur but are likely to gradually go away if you stop hormone therapy:

Head, facial and body hair

- The hair on your face and neck may grow more slowly than before, although it may also continue to grow as it did before you started treatment. It may become slightly less noticeable, but it will not go away (expected onset after 3-6 months; expected maximum effect after more than 3 years).
- Your body hair will become finer, less noticeable and will grow more slowly (expected onset after 6-12 months; expected maximum effect after more than 3 years). Your body hair will continue to grow throughout your treatment. All cis women have body hair.
- If you have male pattern baldness it may slow down but may not stop completely (loss typically slows or stops after 1-3 months; expected maximum effect after 1-2 years). It is also very unlikely that hair that has been lost will grow back.

Body shape, appearance, and function

- You will probably have less fat on your abdomen and more on your buttocks, hips, and thighs. It will be redistributed to a less masculine/more feminine shape, changing from “apple shape” to “pear shape” (expected onset after 3-6 months; expected maximum effect after 2-5 years).

- You may lose muscle and strength in your upper body (expected onset after 3-6 months; expected maximum effect after 1-2 years).
- Your skin may become softer and less oily (expected onset after 3-6 months).
- Your testicles may shrink considerably (expected onset after 3-6 months; expected maximum effect after 2-3 years).

Sexual experience and function

- You will not have as much semen when you ejaculate (the time to onset of this effect is variable).
- You are unlikely to get erections in the morning as often as before and it is likely that you will have fewer spontaneous erections (expected onset after 1-3 months; expected maximum effect after 3-6 months).
- You may not be able to get erections hard enough for penetrative sex (variable, but typical onset after 1-3 months).
- You may have less sex drive (expected onset after 1-3 months; expected maximum effect after 1-2 years).

Emotional changes

Some patients describe feeling more emotionally responsive, e.g., more readily tearful whilst others report a sense of calm emotionally.

Gonadotropin releasing-hormone analogues

Gonadotropin releasing-hormone analogues (GnRHa) further suppress the production of testosterone. These drugs are given by injection every one, three or six months, depending on the preparation used. You may be prescribed estrogen alone or a combination of estrogen and a GnRHa dependent upon your needs. Your endocrine specialist will discuss this with you and agree a plan.

Fertility

Your sperm is likely to no longer mature and/or you may never produce mature sperm again. If this is the case, you will be unlikely to cause a pregnancy and unable to become a biological parent (the time to onset is variable so no-one should start hormone therapy if they are considering becoming a biological parent).

However, it may still be possible that your sperm could still mature and so you may still be able to cause a pregnancy and become a biological parent if you have peno-vaginal intercourse or other intimate sexual contact and do not use contraception.

Specific limitations of feminising hormone therapy

- The hair on your face and neck may continue to grow as before or reduce only so slightly as may continue to cause discomfort.
- The pitch of your voice will not rise, and your speech patterns will not become less masculine or more feminine.
- Your Adam's apple will not shrink.

If you have any concerns about these issues, there are other treatment options available, such as:

- Facial hair epilation.
- Voice and communication therapy.
- Facial feminisation surgery including thyroid chondroplasty and tracheal shave.

Specific Physical Health Risks of Taking Estrogen

Estrogen can increase your risk of **blood clots** which are associated with:

- **DVT (deep vein thrombosis)** and ongoing problems with veins in your legs
- Blood clot in the lungs (**pulmonary embolism, PE**), which may cause permanent lung damage or death
- **Stroke** which may cause permanent brain damage or death
- **Heart attack**

The risk of blood clots is worse if you **smoke** or use nicotine and/or if you are **overweight or obese** (BMI 25 or above). Being overweight also increases your risk for diabetes and heart disease.

Estrogen can increase your risk of **cardiovascular disease**. If you have high blood pressure and take estrogen your overall combined risk of heart disease can be higher. However, blood pressure can be controlled by taking regular medication, exercise, and changes to diet.

Other risks

Taking estrogen can be associated with:

- **Weight gain.** However, this can be controlled with diet and lifestyle changes and help from your GP.
- **Gallstones.** Talk to your clinician and GP if you get severe, recurrent, or long lasting pain in your abdomen, particularly after eating fatty food.
- **Nausea and vomiting.** Talk to your clinician and GP if you have long-lasting nausea or vomiting.
- **Headaches or migraines.** Talk to your clinician and GP if you have headaches or migraines often or if the pain is unusually severe, or if you develop unusual symptoms, such as weakness or tingling in other parts of my body. This is particularly important because worsening migraine can be a risk factor for stroke.
- **Increased prolactin.** One of the signs of this happening is a milky discharge from your nipples. It is not yet known if taking estrogen increases the risk of **prolactinoma** (non-cancerous tumour of the pituitary gland). This is not life-threatening and can be controlled by drug therapy.

Risk of cancer

- It is not certain the extent to which estrogen increases the risk of **breast cancer**, but the risk of breast cancer is increased if you have a family history. All people should examine their breasts regularly for changes or early signs of breast cancer. It is important to check with your GP that you are enrolled in the national breast screening programme. If you continue to take estrogen after the age of 70 you should continue to attend breast screening.

- There is still a risk that you could develop **prostate cancer** even when taking estrogen. The current screening blood test for prostate cancer (PSA) may not be reliable if you are taking estrogen. If you experience any urinary symptoms you will need to remind your GP that you still have a prostate even if you have had gender reassignment surgery.

The risks associated with estrogen may be more likely if you:

- **Smoke**
- Are **overweight**
- Have a personal or family history of **blood clots**
- Have **high blood pressure**
- Have a strong family history of **breast cancer** (more than one person with breast cancer, from amongst my siblings or parents)

Although there is no evidence-based age cut off for the use of estrogen, increasing age can work alongside other risk factors to put you at higher risk of complications from the use of estrogen.

Specific Physical Health Risks of Taking Gonadotropin Releasing-Hormone Analogues

GnRHa's can increase your risk of:

- Changes in **sexual function** (as noted above)
- **Osteoporosis** (softening of the bones, leading to increased risk of fractures)
- Reduced upper body **muscle development and strength**
- **Mood problems** including depression

These effects are less likely to be experienced if you take estrogen regularly at the same time.

Prevention of Medical Complications

You must provide information relating to your personal and family medical history to your endocrinologist or specialist nurse in order that they can discuss any specific risk factors that may be relevant for you and decide on the best course of treatment.

You must let your endocrinologist or specialist nurse know of any other substances or medications that you are taking including alcohol, diet supplements, herbs, other hormones, and street drugs as there may be interactions that may bring about unwanted effects, some of which may be life-threatening.

You must take your medication as prescribed and let your endocrinologist, specialist nurse and/or GP know if you have any problems, side-effects or are unhappy with the treatment. Your endocrinologist or specialist nurse may review and change your prescription if indicated.

You should have your blood pressure checked every six months and have blood tests as recommended by your endocrinologist or specialist nurse to monitor the effectiveness of your treatment and to check for unwanted effects.

You should be 'breast aware', that is be aware of what your breasts look and feel like as they start growing and check them regularly. You may get a milky discharge from your nipples (galactorrhoea). You should seek medical advice if this is the case. It is not known if treatment increases the risk of breast cancer, although the evidence to date is that the risk is lower than in the general population of cis women (that is, women who were assigned female sex at birth).

You must inform any surgeon that plans to operate on you that you are taking Estrogen. You may need to stop taking estrogen six weeks before some surgical procedures or when you may be immobile for a prolonged period to reduce the risk of getting blood clots. You will be able to start again as soon as it is safe to do so.

Stopping treatment

You can choose to stop taking these medicines at any time. It is recommended that you do that with the help of your endocrinologist or specialist nurse to help make sure that you do not experience any unwanted effects.

Your clinician may suggest that you cut the dose or stop taking it if certain conditions develop. This may happen if the side effects are severe or there are health risks that cannot be controlled.