



Patient Information Sheet: Oestrogen-based gender-affirming hormone therapy

We will discuss all this information with you during your GAHT (Hormones) Prescription Advice Session. We provide this information also as a document accessible via www.edennew.life so that you can refer to it whenever necessary.

Which medications are used?

Two main types are used within oestrogen-based hormone therapy:

1. Oestrogen provides the feminising hormone
2. Testosterone Blockers such as anti-androgens or GnRH agonists which block the hormone testosterone

Oestrogen

Comes in tablets, gel, patches or spray. We will explain how to take/use your medication once it is prescribed for you; it will also be written on the box. There is no evidence of a difference in feminising outcomes between these; none of these work “better” or “quicker” than the others. Taking higher doses than prescribed does not cause the feminising changes to happen more quickly and can put your health at risk.

Patches, spray and gel are likely to carry a lower risk of blood clots which you might want to consider when deciding which option you prefer to start on. Obviously, if there is anything in your medical history (such as previous blood clots, or if you are over the age of 45), the Doctor may decide that patches or gel is the safest for you, thus removing your choice.

Testosterone blockers

Can be prescribed if testosterone is not suppressed sufficiently on oestrogen alone, choices are the anti-androgen spironolactone or a GnRH agonist. Spironolactone is a blood pressure tablet at low doses but works as an anti-androgen at higher doses. It does not suppress testosterone like a GnRH analogue, but it is cheaper and will block the effects of testosterone in the body, thus promoting breast growth and slowing down the growth of body hair. Side effects can be low blood pressure, dizziness and sometimes passing urine more often. However, everybody is different and some people experience no side effects.

Side Effects and Risks

- Breast tenderness and weight gain are the most common side effects. Nausea and headaches often occur when first starting oestrogen but usually settle after a couple of weeks.
- Migraine headaches can occur when taking oestrogen; you need to let us know if you develop these.
- There is a small risk of liver problems and raised cholesterol, but we will monitor these by asking you to have regular blood tests (see below for details)
- There is an increased risk of blood clots. Using oestrogen patches instead of tablets helps reduce this risk.
- The risk of health problems is higher if you smoke, if you are overweight or if you are over the age of 45 years.
- There may be a slight increased risk of breast cancer compared with cisgender men.
- Full medical defects and the long-term safety of taking oestrogen for the purposes of transitioning are not known. For most people, the benefits outweigh the risks. Your own circumstances can impact this risk; body size, smoking, and blood pressure can all increase your risk of complications.

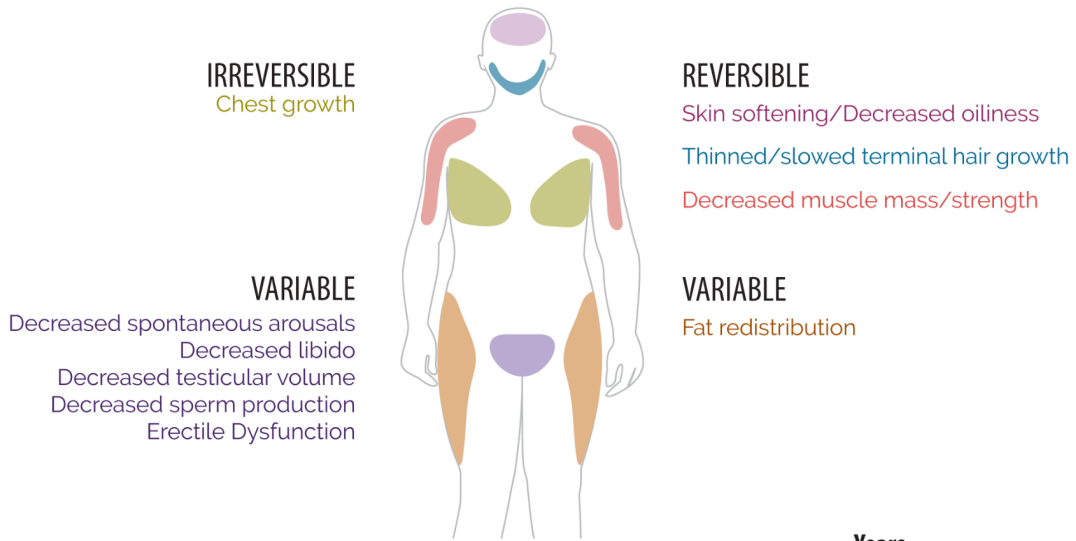
Expected effects of the medication

Effects are gradual and timing does vary, but it can take years for the full effects to be seen. The effects are largely dependent on genetics and the age at which you start hormones, rather than the dose or the type of hormone preparation that you take. It is important that you have realistic expectations about the effects of hormones. This image¹ shows the following information:

Permanent changes include

1. Breast growth: this is gradual over 2 to 3 years. Most people starting oestrogen-based hormone therapy after puberty can expect to develop around an A cup. As with anyone who develops breasts, these will vary in size and size. Breast augmentation surgery often offers trans women the breasts that they desire.
2. Loss of fertility: Your testicles may shrink and may stop producing sperm. This may lead to a permanent loss of fertility. You should consider very carefully whether you want to store any of your sperm prior to starting hormone therapy.

EFFECTS AND EXPECTED TIME COURSE OF A REGIMEN CONSISTING OF AN ANTI-ANDROGEN AND ESTROGEN



PHYSICAL EFFECTS	REVERSIBILITY	ONSET	0	1	2	3	4	5
Softening of skin/decreased oiliness	Reversible	3 - 6 months	[Timeline bar showing onset at 3-6 months and maximum effect at 3 years]					
Body fat redistribution	Reversible/Variable	3 - 6 months	[Timeline bar showing onset at 3-6 months and maximum effect at 3 years]					
Decreased muscle mass/strength ^b	Reversible	3 - 6 months	[Timeline bar showing onset at 3-6 months and maximum effect at 2 years]					
Thinned/slowed growth of body/facial hair ^c	Reversible	6 - 12 months	[Timeline bar showing onset at 6-12 months and maximum effect at 3 years]					
Male Pattern Baldness ^d	Reversible	1 - 3 months	[Timeline bar showing onset at 1-3 months and maximum effect at 2 years]					
Breast growth	Irreversible	3 - 6 months	[Timeline bar showing onset at 3-6 months and maximum effect at 3 years]					
Decreased testicular volume	Variable	3 - 6 months	[Timeline bar showing onset at 3-6 months and maximum effect at 3 years]					
Decreased libido	Variable	1 - 3 months	[Timeline bar showing onset at 1-3 months and maximum effect at 2 years]					
Decreased spontaneous erections	Variable	1 - 3 months	[Timeline bar showing onset at 1-3 months and maximum effect at 2 years]					
Decreased sperm production	Variable	variable	[Timeline bar showing onset at 3-6 months and maximum effect at 3 years]					
Erectile Dysfunction	Variable	variable	[Timeline bar showing onset at 3-6 months and maximum effect at 3 years]					

a) Estimates represent published and unpublished clinical observations
 b) Significantly dependent on amount of exercise

c) Complete removal of male facial and body hair requires electrolysis, laser treatment, or both
 d) No regrowth, loss stops

Expected Onset Expected Maximum Effect^a

¹. Copied from <https://teenhealthsource.com>. Effects and expected time course of a regimen consisting of an anti-androgen and estrogen J.Frei, M.Kalensky, E.McIntosh, J.Mystkowski, E.Schwelnus, B.Shaw, H.Thompson, Gender Affirmation in Adult Primary Care, The Journal for Nurse Practitioners, Volume 15, Issue 10, 2019, <https://doi.org/10.1016/j.nurpra.2019.07.018>

These changes are not permanent

- Softer skin
- Decreased muscle mass and strength
- Less body hair: reduced in growth and thickness but doesn't go away completely. Laser treatment or electrolysis can provide a more permanent solution.
- Redistribution of fat (more on hips, bum and thighs)

Things that don't change

- Facial hair growth slows but doesn't completely stop
- Voice stays the same
- Bone structure of your face and Adam's apple doesn't change

Sex

Your sex drive will probably be lower. You will notice that you will get erections less often and when these do occur, they may be more difficult to sustain. This may cause difficulties for you if you want to use your penis for penetrative sex. If this is an issue, please talk to us. There is medication that can help you sustain an erection and also lowering your testosterone slightly may also help.

Your testicles may also shrink to half their original size; whilst some people think this means that they have no sperm - we cannot be sure of this. It is really important if you are having sex with someone who could become pregnant, you should use a condom or other contraception.

Fertility

As stated above, the impact of oestrogen-based hormone therapy on fertility is unclear, but it is safest for you to assume that within a few months of starting oestrogen, you could permanently and irreversibly lose the ability to create sperm. You must consider whether you want to preserve any sperm.

Emotional Health

You may feel more emotional when commencing on oestrogen. It is not known exactly how hormones will impact your mental health and it does vary between people. It is almost like you are going through a second puberty (but this time the one you want to go through!). You may experience a whole heap of emotions, or you may notice no change. Some people experience mood swings or feel anxious and depressed. Gender affirmation can be a stressful and emotional time regardless; please ensure that you have support and please know that you can reach out to us at Eden if you need to.

Cancer Screening

- Breasts: We recommend that anyone with breasts has a mammogram as part of the National Screening Service on the NHS. Please ensure that your GP is aware that you will require this.
- Prostate: This is a small gland that surrounds the opening of the bladder. We recommend that you speak to your GP immediately if you develop trouble having a wee, such as poor flow, dribbling, starting or stopping seeing or if there is blood in your wee.

Blood Tests

We need you to have blood tests before you start any hormone medication. This is to ensure that you don't have any underlying medication conditions, i.e. that you are fit to start on medication and also to provide Eden New Life with your baseline blood levels.

Initial baseline blood tests

We insist on:

- FBC, U&Es, LFTs
- Fasting Lipids
- HbA1c
- FSH, LH, Prolactin, SHBG, Oestradiol and Testosterone

If you have had these carried out with your GP within the last two weeks we will accept those results and you do not need to obtain a new set of blood tests.

Follow-up blood tests

We insist on these every 3/12 for the first year, then every 6/12 once stable on a dose

- Oestradiol, testosterone and LFTs

We also need you to tell us your **weight and blood pressure** twice a year.