

Oestrogen and Anti-Androgens

Some trans and gender-diverse people, presumed male at birth, may use hormone therapy to affirm their gender. This typically involves increasing the hormone estradiol, and lowering testosterone. Estradiol is the mainstay but often testosterone blockers are needed too.

While hormone therapy reduces the rate of face and body hair growth, it doesn't remove it altogether and many people choose to have laser hair removal or electrolysis. Always discuss your individual needs and responses with your doctor.



CONTENT WARNING

This flyer contains references to genitalia, sexual arousal (erections), fertility, and sexual health. When discussing genitals, we use anatomical/medical terms.

Not all people want the same changes, and not all bodies will respond the same to oestrogen or anti-androgens. All of the body changes described in this flyer are typical but not universal.

EXPECTED CHANGES

Taking oestrogen will change your body in many ways. It will make your skin softer, change where your fat is stored, and you will start to grow breasts. Hormone therapy may shrink your testicles and affect your erections. The main changes that happen are typically irreversible and cannot be undone. These permanent changes are testicle shrinkage, infertility, and the growth of your nipples and breasts. Hormone therapy will not undo bone structure (including the Adam's apple) nor will it change a voice that has been lowered by a testosterone-driven puberty. Some people have voice training or vocal feminisation surgeries.

Learn more about hormonal gender affirmation here:



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www.transresearch.org.au

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ESTRADIOL

Oestrogen or estradiol in Australia comes in different forms.

- Tablets/Pills (**Progynova, Zumenon, Estrofem**) are taken every day.
- Patches are changed once or twice per week, depending on the brand (**Estradot, Estraderm, Climara**).
- Gels are applied to the skin daily (**EstroGel, Sandrena**).
- There are no TGA-approved implants or injections in Australia, but some people use **estradiol implants** from compounding pharmacies. Unlike in the USA, injections are rare in Australia.

When you take hormone therapy, your doctor will monitor the levels of hormones in your body with blood tests. They will typically try to maintain your blood hormone levels in the same range as cisgender women. On a blood test this will read as an estradiol level between 250-1000 pmol/L and a testosterone level lower than 2 nmol/L but it does vary depending on the medications used. Some patients may prefer to have a testosterone level that remains higher.

There is much more research needed to determine the best hormone regimen, so don't be surprised to hear varying recommendations from within the community, and varying experiences online.

ANTI-ANDROGENS, ALSO KNOWN AS TESTOSTERONE BLOCKERS

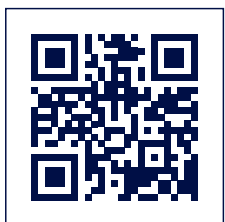
There are several types of anti-androgens, all of which are tablets. The most common types are **cyproterone acetate, spironolactone**, and (less commonly) **bicalutamide**. Micronized progesterone is sometimes used, although further research is needed to work out whether this has benefit. Discuss with your doctor whether this would be appropriate for you.

FERTILITY

Taking oestrogen and anti-androgens reduces your fertility. This effect is typically irreversible, continuing in some people even if hormones are no longer taken.

Some people choose to store their sperm before starting hormone therapy. This is called fertility preservation. This involves giving a sperm sample, having your sample processed, and then storing this sample in a freezer until you want to use it. You can use stored sperm for artificial insemination or IVF. Sperm storage will come with additional costs to hormone therapy, as you will need to pay a storage facility to keep your sperm safe.

Learn more about hormonally transitioning here:



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No two hormonal journeys are the same, but a typical timeline is as follows.

CHANGES AFTER 1-3 MONTHS OF ESTROGEN

- Softening of skin.
- Decrease in muscle mass and increase in body fat. Redistribution of body fat to buttocks and hips.
- Decrease in sex drive.
- Fewer instances of waking up with an erection or spontaneously having an erection. Erections may become less firm during sex, or may not occur at all.
- Decreased ability to make sperm and ejaculatory fluid.

GRADUAL CHANGES OVER 1-2 YEARS OF ESTROGEN

- Nipple and breast growth.
- Slower growth of facial and body hair. Slowed or stopped balding.
- Decrease in testicular size.

CHANGES AFTER 1-3 MONTHS OF ANTI-ANDROGENS

- Decreased testosterone in the body.
- Decrease in sex drive.
- Fewer instances of waking up with an erection or spontaneously having an erection. Erections may become less firm during sex, or may not occur at all.
- Decreased ability to make sperm and ejaculatory fluid.

GRADUAL CHANGES OVER 2 YEARS OF ANTI-ANDROGENS

- Slower growth of facial and body hair.
- Slowed or stopped balding.
- Slight breast growth.

ARE THERE ANY SIDE-EFFECTS OR HEALTH RISKS OF HORMONE THERAPY?

There are side effects of estradiol, including reduced fertility, a raised risk of blood clots, weight gain, loss of muscle, low bone density and probable increased risk of heart disease and stroke. Some others include mood swings (more with cyproterone), passing excessive urine (spironolactone), and nausea.

It is unclear whether hormone therapy increases the risk of breast cancer, but anyone with breasts should have mammograms every 2 years from the age of 50 – 74.

We are learning more about the side-effects of hormone therapy, so there may be new understanding over time.

It is important for all people to reduce their risk of heart disease by maintaining a healthy diet, engaging in exercise, not smoking and monitoring blood pressure, glucose and cholesterol.

For health advice catered to your specific circumstances, speak with your doctor.