Rainbow Care

Testosterone-based Hormone Therapy

Expected changes on testosterone-based hormone therapy

Average timeline	Effect of testosterone
1–3 months after starting testosterone	• decreased oestrogen in the body • increased sex drive • vaginal dryness • increased growth, coarseness, and thickness of hairs on arms, legs, chest, back, & abdomen • oilier skin and increased acne • increased muscle mass and upper body strength • redistribution of body fat to the waist, less around the hips • increased sweating and change in body odour • mood changes may occur including increased aggression, motivation and sexual desire
1–6 months after starting testosterone	• menstrual periods stop • lower/ bottom growth (clitoris) - typically 1-5 cm
3–6 months after starting testosterone	• voice starts to crack and drop within first 3–6 months, but can take a year to finish changing
1 year or more after starting testosterone	• gradual growth of facial hair (usually 1–4 years) • possible balding

Limitations of testosterone-based hormonal therapy

Once you have stopped growing after puberty, testosterone will not affect the size and shape of your bones. It will not increase your height or change the size of your hands and feet.

While testosterone will typically cause your voice to drop, it does not change your intonation (rise and fall of vocal pitch) or your speech patterns and you may wish to have speech therapy to modify them.

Testosterone may slightly change the shape of your breasts by increasing muscle and decreasing fat but it does not make breast tissue go away.

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Information for non-binary / gender diverse individuals

It is possible to have testosterone and oestrogen hormonal levels that are between the female and male ranges. Unfortunately, there is a lack of evidence for this practice as most research has only considered binary gender categories. Some sex hormone, whether from your own body or from replacement is recommended for non-binary and gender-diverse individuals, as low sex hormones levels in both cis genders can cause unwanted side effects.

It is very difficult to tailor testosterone-based hormonal therapy to select for some features and not others. It is possible to cease hormonal therapy after some permanent changes have occurred.

It is important to understand that bottom (clitoral) growth and voice deepening may occur even at low levels of testosterone. Later changes, such as the development of facial hair and a more masculine body shape, are difficult to achieve without bottom growth or voice deepening.

There are non-hormonal alternatives for supporting non-binary and gender-diverse people in gender affirmation, including speech therapy, attire, and non-hormonal hair treatment options, for those who do not desire clitoral growth or maximum masculinisation.

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Fertility and Contraception

The long-term effects of testosterone-based hormonal therapy on the ability to have children are not well understood. Therefore is it is important to consider your beliefs and desires regarding parenthood and how your views may evolve over time. This may be a difficult topic to think about for many reasons, and it may be challenging to predict how you may feel in the future. I encourage you to discuss this decision with the important people in your life and to remember that it is okay to change your opinion as your life experience evolves. You can revisit this topic with your doctor at any point in your journey.

Testosterone-based hormonal therapy can impair ovulation. Periods usually stop after about 6 months of testosterone therapy. Current evidence suggests that the effects of testosterone on reproductive function are largely reversible. Studies have shown that ovarian function can return to normal, and unassisted pregnancy can occur after stopping testosterone, even after long term treatment. However, due to limited long-term data, a full return to baseline fertility cannot be guaranteed.

Eggs can be collected for fertility preservation. They can be frozen or fertilised with sperm to create embryos, which can also be frozen. Egg collection requires hormonal injections and a minimally invasive procedure in which the eggs are retrieved from the ovary via the vagina. In Australia, eggs can currently only be stored for 10 years. Egg freezing requires a referral to a fertility specialist, and Dr Holly can arrange this for you if you are interested in exploring this option further.

Research has been shown that it is possible to undertake egg freezing, carry a pregnancy (if you have a uterus) and breast/chest feed (whether you carried the pregnancy or not) after gender affirming hormonal treatment has started. However, testosterone treatment must be stopped for a period of time to allow these processes to occur safely and effectively. As the available evidence is based only on a small number of case reports, successful pregnancy cannot be guaranteed with this approach. If you are considering carrying a pregnancy yourself, please talk to your doctor, as testosterone can have harmful effects on a foetus. It is not yet clear how long testosterone must be stopped before pregnancy.

Adoption is another pathway to parenthood, but the adoption process in Australia is lengthy and complex, with significant barriers. It can take years from the initial decision to adopt to the finalisation of the adoption process.

While testosterone-based hormonal therapy may affect your fertility, it is NOT a contraceptive; it does not prevent pregnancy and lack of periods does not mean you cannot fall pregnant. If you have intercourse that could result in pregnancy, it is important to discuss the risk of pregnancy with that sexual partner and use appropriate contraception, even if you do not mind falling pregnant. Testosterone can have harmful effects on a foetus so treatment should be stopped before any pregnancy. Contraceptive options include condoms or progesterone only contraception (e.g. the mini pill or implants) which can have the added benefit of menstrual suppression in some individuals. Permanent contraception or sterilisation procedures include tubal ligation, hysterectomy, and oophorectomy which all require a surgical procedure.