

Pediatric Masculinizing Hormone Therapy Information For Parents

The use of hormone therapy for gender transition/affirmation is based on many years of experience treating transgender people. Research on hormone therapy continues to provide information on the safety and efficacy of hormone therapy, but all of the long-term consequences and effects of hormone therapy may not be fully understood.

This information will help you and your child to consider the expected benefits of hormone therapy and the possible side effects of hormone therapy. You and your child can decide, with their medical provider, if hormone therapy is right for them.

Hormone Therapy

Testosterone is used to masculinize the body, to reduce female features and increase masculine features. Your child's medical provider will determine the form of testosterone (oral, shots, gels or creams, patches, implanted pellets) and the dose that is best for your child based on their personal needs and wishes, as well as any medical or mental health conditions they might have. Each person responds to testosterone differently, and it is difficult to predict how each person will respond. Your child needs to take the testosterone only as prescribed and to discuss their treatment with their doctor before making any changes.

Expected Effects of Testosterone Therapy

The masculine changes in your child's body may take several months to become noticeable and usually take 3 to 5 years to be complete.

Permanent Changes

These will not go away, even if your child decides to stop testosterone treatment:

- Voice pitch becomes deeper
- Increased growth, thickening and darkening of hair on the body
- Growth of facial hair
- Possible hair loss at the temples and crown of the head (male pattern baldness) with possible complete baldness
- Increase in the size of the clitoris/phallus

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Not Permanent Changes

These will likely reverse if testosterone treatment is stopped:

- Menstrual periods will stop, usually within a few months of starting testosterone.
- Possible weight gain. If your child gains weight, this fat will tend to go to the abdomen and mid-section, rather than the buttocks, hips and thighs, making the body look more masculine.
- Increased muscle mass and upper body strength.
- Possible feeling of more physical energy.
- Skin changes, including acne that may be severe and skin oiliness.
- Increased sex drive.
- Changes in mood or thinking may occur; your child may find that they have a decreased emotional reaction to things and possible increased feelings of anger or aggression. Some people find their mental health improves after starting hormone therapy. The effects of hormones on the brain are not fully understood.

Risks and Possible Side Effects of Testosterone Therapy

- **Possible loss of fertility.** Your child may not be able to get pregnant after being on testosterone therapy for some time; how long this might take to be a permanent effect is unknown. Some people choose to harvest and bank eggs before starting on testosterone therapy.
- **Testosterone is not reliable birth control.** Even if your child's periods stop, they could get pregnant. If they are having penetrative sex with a sperm-producing partner, they should discuss using birth control with their partner and/or medical provider.
- **High levels of testosterone may cause harm and even death to a developing fetus.** Other effects of testosterone on the ovaries and on developing eggs are not fully known.
- **Pelvic pain.** Some trans men, after being on testosterone for a number of months, may develop pelvic pain. Often this will go away after some time, but it may persist; the cause is not known.
- **The lining of the cervix and walls of the vagina may become more dry and fragile.** This may cause irritation and discomfort. It also may make your child more susceptible to sexually transmitted infections including HIV if your child has unprotected penetrative sex.
- **The effects on the risk of breast, uterine and ovarian cancer are not known.**
- **Possible increased risk of cardiovascular disease** (heart attacks, strokes and blockages in the arteries) due to changes in cholesterol, higher blood pressure and other changes to the body.
- **Possible increased risk of developing diabetes.**
- **Increased appetite and increased weight gain** from both muscle and fat.
- **Increased risk of sleep apnea** (breathing problems while you are sleeping).
- **Possible abnormalities in blood tests for the liver.** Possible worsening of damage to the liver from other causes.

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- **Increase in the hemoglobin and hematocrit** (the number of red blood cells). If this increases to levels higher than is normal in males, it may cause problems with circulation, such as blood clots, strokes and heart attacks.
- **Increased sweating.**
- **Weakening of tendons and increased risk of injury.**
- **Possible worsening or triggering of headaches and migraines.**
- **Possible increase in frustration, irritability or anger.** Possible increased aggression and worsened impulse control.
- **Possible worsening of bipolar disorder, schizophrenia and psychotic disorders or other unstable moods.**

Additional health information:

- Smoking cigarettes may increase some of the risks of taking testosterone therapy.
- Taking testosterone in doses that are higher than recommended will increase the risks of testosterone treatment. Higher doses will not necessarily work better to masculinize the body. In fact, abnormally high amounts of testosterone can be converted to estrogen that may interfere with masculinization.
- Testosterone treatment is expected to be lifelong. Suddenly stopping testosterone after a long time on the medication may have negative health effects.
- Your child may choose to stop hormone therapy at any time and for any reason. They are encouraged to discuss this decision with their medical provider.
- Your child's provider may decrease the dose of testosterone or stop prescribing testosterone because of medical reasons and/or safety concerns. You and your child can expect that the medical provider will discuss the reasons for all treatment decisions with both of you.
- Hormone therapy is not the only way that a person may appear more masculine. Your child's medical provider and/or a mental health provider can help your child think about these other options.

It is important for you and your child to:

- Take testosterone only at the dosage and in the form that your child's medical provider prescribes.
- Inform your child's medical provider if your child is taking or start taking any other prescription drugs, dietary supplements, herbal or homeopathic drugs, or street/recreational drugs or alcohol so that you and your child can discuss possible interactions with and effects on your hormone treatment.
- Inform your child's medical provider of any new physical symptoms or any medical conditions that may develop before or while they are taking testosterone and discuss the evaluation of these conditions. Inform your child's provider if you think they are having bad side effects from the testosterone.
- Keep regular follow up appointments. Routine preventive care is important.
- Have regular monitoring blood testing done. Your child's provider will discuss what tests are necessary in order to monitor for potential harmful effects and to ensure that your child's testosterone treatment is safe and effective.