

Feminizing Hormone Therapy

What Is It And Is It Right For Me?

CHA is committed to providing the transgender community access to high quality health care and services. We offer hormone therapy for adults and adolescents who are 16 or older and access to services to those under 16. Our CHA providers will work with you to support the decision that is best for you.

What are hormones? Hormones are chemical messengers that tell tissues of the body how to function, when to grow, when to divide and when to die. They control many functions of the body, including growth, sex drive, hunger, thirst, digestion, metabolism, fat burning and fat storage, blood sugar, cholesterol levels and reproduction.

What are sex hormones? Sex hormones are involved in the development of the penis and testicles, or the vulva and clitoris (external genitals). Sex hormones also affect the secondary sex characteristics that typically develop at puberty. These characteristics include facial and body hair, bone growth, breast growth and voice changes.

There are three categories of sex hormones in the body:

- Androgens: testosterone, dehydroepiandrosterone (DHEA), dihydrotestosterone (DHT)
- Estrogens: estradiol, estriol, estrone
- Progestin: progesterone

Generally, people with testicles tend to have higher androgen levels, and people with ovaries tend to have higher levels of estrogens and progestogens.

What Is Feminizing Hormone Therapy?

Hormone therapy can help transgender people feel more comfortable in their bodies. It involves taking medication to change the levels of sex hormones in your body. Changing these levels will affect your hair growth, fat distribution, muscle mass and other features that are associated with sex and gender.

Feminizing hormone therapy can help make the body look and feel less “masculine” and more “feminine” — making your body more closely match your identity. If feminizing hormone therapy is started before the changes of male puberty begins, male secondary sex characteristics, such as increased body hair and changes in voice pitch, can be avoided.

During feminizing hormone therapy, you’ll be given medication to block the action of the hormone testosterone, a hormone produced mainly in the testes that stimulates the development of male secondary sexual characteristics. You’ll also be given the hormone estrogen to decrease testosterone production and induce feminine secondary sex characteristics (breast development, hips widening, pubic hair growth).

Feminizing hormone therapy can affect your fertility and sexual function and cause other health problems. Your CHA providers will help you weigh the risks and benefits associated with feminizing hormone therapy specific to you.

What are the benefits of feminizing hormone therapy? Feminizing hormone therapy has important physical and psychological benefits. Bringing mind and body closer together eases gender dysphoria and can help you feel better about your body. After starting hormones, people who have had gender dysphoria often describe being less anxious, less depressed, calmer and happier.

Research suggests feminizing hormone therapy can be safe and effective as long as you maintain hormone levels in the normal range for the target gender.

When should I start feminizing therapy? If used in adolescence, hormone therapy typically begins at age 16. Ideally, treatment starts before the development of secondary sex characteristics (facial and body hair, bone growth, breast growth, voice changes, etc.) so that teens can go through puberty as their identified gender. Many trans girls are treated with a medication to delay the start of puberty. Gender affirming hormone therapy is not typically used in children.

Feminizing hormone therapy isn't for all trans women. Your provider might discourage feminizing hormone therapy if you:

- Had or have a hormone-sensitive cancer, such as prostate cancer
- Have a thromboembolic disease, such as when a blood clot forms in one or more of the deep veins of your body (deep vein thrombosis) or a blockage in one of the pulmonary arteries in your lungs (pulmonary embolism)
- Have uncontrolled behavioral health conditions
- Have uncontrolled significant medical conditions
- Have a condition that limits your ability to provide informed consent

What Medications Are Involved?

There are different kinds of medicines used to change the levels of sex hormones in your body.

These medicines work by affecting:

- The part of your brain that stimulates sex hormone production
- Your testicles (which produce testosterone)
- The cells in your body that respond to sex hormones

Usually, feminizing hormone therapy involves:

- Estrogen
- A medicine to block testosterone
- A combination of estrogen and a medicine to block testosterone
- Sometimes a progestin is added

What is a typical dose? Feminizing hormone therapy varies greatly from person to person. Deciding what to take depends on your health as each hormone therapy has different risks and side effects. In prescribing a specific medicine and dose, your provider will consider your overall health, including any other medicines you are taking. Every person is different — each body absorbs, processes and responds to sex hormones differently.

If you have your testicles removed, your body will only produce a tiny amount of testosterone, so the dose of estrogen can be reduced or androgen blockers can be reduced or stopped. To keep your bones strong, you will need to stay on estrogen or another form of medicine for the rest of your life and take calcium and vitamin D supplements. Your provider may also suggest you take low-dose testosterone to help your metabolism.

What Are The Risks For Feminizing Hormone Therapy?

Talk to your provider about the changes in your body and any concerns you might have.

Complications of feminizing hormone therapy might include:

- Blood clots
- Type 2 diabetes
- High triglycerides, a type of fat (lipid) in your blood
- Cardiovascular disease
- Excessive prolactin in your blood (hyperprolactinemia)
- Weight gain
- Infertility
- Nipple discharge
- High potassium (hyperkalemia)
- Stroke
- High blood pressure (hypertension)
- Increased risk of breast cancer compared to men whose gender identity matches their sex assigned at birth (cisgender men)

Will I be able to have children? Feminizing hormone therapy might reduce your ability to have children as the risk of permanent infertility increases with long-term use of hormones. If you want to have biological children, talk to your provider about your options before beginning feminizing hormone therapy.

Hormone therapy does not lower your risk of HIV and other sexually transmitted infections. Depending on how you have sex, you can use condoms, gloves or other latex barriers for protection. Feminizing hormones can make erections less firm, increasing the risk of condom leakage. In this situation, your partner can use a special condom they put inside their anus or vagina. They are called “female condoms,” but can be used by people of any gender.

Although androgen blockers and estrogen affect sperm production, there may still be a chance you could make someone pregnant after starting hormone therapy. **Depending on how you have sex, you may need to use birth control.**

How Can I Prepare For Feminizing Hormone Therapy?

Before starting feminizing hormone therapy, your provider will evaluate your health to rule out or address any medical conditions that might affect your treatment.

The evaluation might include:

- A review of your personal and family medical history
- A physical exam, including an assessment of your external reproductive organs
- Lab tests measuring your lipids, blood sugar, blood count, liver enzymes, electrolytes and the hormone prolactin
- Identification and management of tobacco use, drug abuse, alcohol abuse, HIV and other sexually transmitted infections
- Age- and sex-appropriate screenings
- A review of your immunizations
- Discussion about sperm freezing
- Discussion about use of potentially harmful treatment approaches, such as unprescribed hormones, industrial-strength silicone injections or self-castration

You might also need a behavioral health evaluation by a provider with expertise in transgender health. The evaluation might assess:

- Risk-taking behaviors, including substance use and use of nonmedical-grade silicone injections or unapproved hormone therapy or supplements
- Protective factors such as social support from family, friends and peers
- Your goals, risks and expectations of treatment and your future plans for your care
- The impact of your gender identity at work, school, home and social environments, including issues related to discrimination, relationship abuse and minority stress
- Your gender identity and gender dysphoria
- Sexual health concerns
- Mood or other mental health concerns
- Adolescents younger than age 18, accompanied by their parents or guardians, also should see providers and behavioral health providers with expertise in pediatric transgender health to discuss the risks of hormone therapy, as well as the impact and possible complications of gender transition in that age group.

What Changes Can I Expect?

For some people, this psychological change happens as soon as they start taking hormones. For others, it happens a bit later as the physical changes appear more. Each person changes differently. How quickly changes appear for you depends on your age, the number of hormone receptors in your body and the way your body responds to the medicine. There is no way to know how your body will respond before you start hormones.

Androgen blocker (spironolactone) without estrogen

Taking spironolactone (the most common androgen blocker) without estrogen has small effects blocking the effect of testosterone in your body. Most of the changes are reversible, which means if you stop taking it, your body will go back to how it was before you started taking the medicine. Androgen blockers affect the whole body. You cannot pick the changes you want.

Average Timeline	Effect
After 1 to 3 months	<ul style="list-style-type: none">• Decreased sex drive• Fewer instances of waking up with an erection or spontaneously having an erection. Some people also have difficulty getting an erection even when they are sexually aroused• Decreased ability to make sperm and ejaculatory fluid
Gradual changes (usually takes at least 2 years)	<ul style="list-style-type: none">• Slower growth of facial or body hair• Slowed or stopped “male”-pattern balding• Slight breast growth (reversible in some cases, not in others)

Estrogen

Taking estrogen has stronger physical “feminizing” effects. Taking estrogen has an indirect effect of suppressing testosterone production. Like androgen blockers, estrogen affects the whole body. You cannot pick the changes you want.

Average Timeline	Effect
After 1 to 6 months	<ul style="list-style-type: none">• Softening of skin• Less muscle mass and more body fat• Redistribution of body fat to be more on breasts and hips• Possible decrease in sex drive• Fewer instances of waking up with an erection or spontaneously having an erection. Some people also have difficulty getting an erection even when they are sexually aroused.• Decreased ability to make sperm and ejaculatory fluid
Gradual changes (maximum changes after 2 to 3 years)	<ul style="list-style-type: none">• Nipple and breast growth• Slower growth of facial and body hair• Slowed or stopped “male” pattern balding• Smaller testicles

Most of the effects of hormones happen in the first two years. During this time, the CHA provider who prescribes your hormones may want to see you and/or have you do blood tests every three months. This is to check if the hormones are working properly. After that, you will likely need an appointment every 6-12 months.

At appointments in the first two years, your provider will likely:

- Look at your facial and body hair. If you shave, the provider will ask how quickly your hair grows back.
- Ask about changes to your sex drive, erections, or other sexual changes.
- Ask about breast growth or nipple changes
- Order a blood test to see what your hormone levels are.
- Ask how you feel about the changes that have happened so far.

After two years, your provider will monitor the effects by asking if you notice any more changes from the hormones. Depending on when you started hormone therapy, when you are 21 years old, you will transition to a medical provider who can continue your treatments as an adult. Your CHA provider will assist you in your transition to an adult healthcare provider.

Are the changes permanent? Some of the changes from feminizing hormone therapy may be permanent.

If you stop taking the medicine, your body will return to how it was before you started the hormones except for in these three areas:

- Breast growth
- Fertility
- Fat distribution to hips

Breast Growth: If you take the androgen blocker spironolactone without estrogen because you do not want visible changes, you might see some breast growth. This growth happens slowly, so you can stop taking it if you do not want breast growth. Breast growth from spironolactone is usually small and reversible. But in some people, the breast tissue remains even after the spironolactone is stopped.

Estrogen causes permanent nipple development and breast growth. Even if you stop taking estrogen, the breast tissue will not go away and your nipples will not shrink.

Fertility: Both androgen blockers and estrogen affect your production of sperm, which means you may have trouble having biological children after taking them. It is also important to know that we do not yet fully understand the long-term effects feminizing medications have on fertility. If you stop taking feminizing hormones, your ability to make sperm may or may not return to what it was before you started. We strongly recommend you talk about options for sperm banking before starting hormone therapy. If you have already started hormones, you can work with your provider to stop the hormones, give sperm samples and store them, if they are viable, before returning to taking hormones. Discuss birth control options with your provider as there is still a chance you can get someone pregnant while on hormone therapy.

What Will Not Change?

Hormone therapy does not affect some parts of the body. Some changes are very small. Parts of the body that will not change are sex chromosomes, the penis, vagina, Adam's apple, bone structure, voice pitch or your height.

Hormone therapy can make facial and body hair grow more slowly and be less noticeable, but hair will not go away completely. While "male" pattern baldness may slow down or stop, bald areas will not grow hair again. Feminizing hormone therapy does not change how high or low your voice is (pitch). Hormone therapy will not change your speech patterns. Speech therapy can help change pitch and other aspects of speech associated with gender.

Once your bones have stopped growing after puberty, feminizing hormone therapy cannot change the size or shape of your bones. Your height or the size of your hands and feet will not change.

What Else Should I Know?

During your first year of feminizing hormone therapy, you'll need to see your provider approximately every three to six months for checkups, as well as anytime you make changes to your hormone regimen.

Your provider will:

- Document your physical changes
- Monitor your hormone levels, and use the lowest dose necessary to achieve your desired physical effects
- Monitor changes in your lipids, fasting blood sugar, blood count, liver enzymes and electrolytes that could be caused by hormone therapy
- Monitor your behavioral health

You will also need routine preventive care, including:

- **Breast cancer screening:** This includes monthly breast self-exams and age-appropriate mammography screening according to the age-appropriate breast cancer screening recommendations for cisgender women.
- **Supplementation:** This includes standard calcium and vitamin D supplementation, along with bone density assessment according to the age-appropriate recommendations for cisgender women.
- **Prostate cancer screening:** This should be done according to age-appropriate recommendations for cisgender men. With estrogen treatment, your PSA level is expected to decrease by about 50 percent.

Transgender Care at CHA

CHA earned the coveted "LGBTQ+ Healthcare Equality Leader" designation for 2022 in the Human Rights Campaign Foundation's 15th anniversary edition of the Healthcare Equality Index. Visit our [LGBTQ+ Living Well](#) and [Transgender Care](#) pages to find out more about our commitment to caring for the transgender and gender diverse communities.

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