



# Hormone Replacement Therapy Feminizing Guide



The goal of feminizing hormone therapy for transgender people is to reduce the effects of testosterone on the body and induce secondary female sex characteristics. This requires the suppression of endogenous androgens and the introduction of estrogen into the system.

The effects from this treatment are both reversible and irreversible, and all medication and treatment should be consulted carefully with your physician to ensure a safe approach to your healthcare.

Please see the ensuing documents for information regarding medications, potential side effects, and more.



## Anti-Androgens

Anti-androgens are medications that work to reduce the effect of testosterone and lower the level of testosterone in your system. In order for Estrogen to be most effective, your testosterone must be lowered to a safe level. This is achieved using anti-androgen medication.

The most common of these is Spironolactone (pronunciation?), taken in pill format, but you will find there are alternatives with Cyproterone, Finasteride and Dutasteride (see chart on following page for more details)

It should be noted that while anti-androgens work to lower your testosterone level and its effects of the body, it does not induce estrogen into your system. As such, anti-androgens alone are not recommended for long-term feminizing treatment.



## Estrogen

Estrogen medications work to incite estrogen receptors in order to start feminization. This is generally the goal of trans women, but not a step all trans women want to take. Estrogen can work to suppress androgens on its own but would need to be administered in high doses in order to achieve this effect, thus it is usually administered alongside anti-androgen medications in order to safely achieve the desired feminization effect.

The effects of this feminization treatment differ from patient to patient, and there are several factors to consider when it comes to the effects said treatment will have on your body. These include, but are not limited to age, genetics, lifestyle, your overall health and more.

Some aspects of the body are not affected by the intake of estrogen, most notably the voice. Estrogen has no effect on your vocal cords and will not affect your speaking voice, which will require working with a vocal coach or doing at home training to modify the pitch and timbre of your voice.

While there is limited risk involved in taking estrogen, it should be noted that it is recommended to take a low dose at first, and slowly increase with consultation with your healthcare provider to ensure a healthy level is maintained.



## Progestins

The usage of progesterone in trans women is an as yet unproven aspect of the feminization process. Evidence for its success is anecdotal at this stage, and its effectiveness has yet to be properly studied or proven. As such, it is a controversial portion of hormone replacement therapy, but is still administered by physicians in some cases.

Generally, progesterone is prescribed to assist with breast growth and nipple development, usually once a trans woman is further along in her treatment plan, and further assistance is required for further breast development.

While the benefits of progesterone are unproven, there are risks to be aware of with this particular medication, including heightened risk of breast cancer, blood clotting, and strokes.

If used, progesterone is oftentimes limited to a short span of time, usually within 2-3 years, with a separate consent form signed to ensure the patient is aware of the increased risk due to this medication.

## Possible side effects:

There are potential side effects of hormone replacement therapy that should be considered as well, including but not limited to:

- Venous Thromboembolism
- Cardiovascular and Cerebrovascular disease
- Increased risk of Breast Cancer
- Hyperprolactinemia
- Liver/Gallbladder issues
- Seizure disorders and anticonvulsant therapy

It is important to discuss these issues with your doctor before starting hormone replacement therapy to ensure the risks are noted ahead of time. While hormone replacement therapy is more often than not a safe procedure, the potential risks warrant consideration ahead of time to ensure that any harm is mitigated.

In addition to health issues, there are physical side effects to be taken into consideration as well, such as decreased libido, penile dysfunction and loss of fertility. It is recommended to do some family planning ahead of beginning treatment if this is of interest to the patient, as long-term effects of hormone replacement therapy have lasting effects on a patient's fertility and sexual function.

Physical Effect	Estimated start	Estimated Max. Effect	Reversibility
Body Fat redistribution*	3-6 months	2-5 years	Variable
Decreased Muscle Mass	3-6 months	1-2 years	Reversible
Softening of skin	3-6 months	2-5 years	Reversible
Decreased libido	1-3 months	1-2 years	Variable
Decreased spontaneous erections	1-3 months	1-2 years	variable
Erectile dysfunction	variable	variable	Variable
Breast growth	3-6 months	2-3 years	Irreversible
Decreased testicular volume	3-6 months	2-3 years	Variable
Thinning/slowing of body hair**	6-12 months	2-3 years	Reversible
Male Pattern Baldness	1-3 months	1-2 years	Reversible

These figures are to be taken as estimations and not hard and fast truths, and no two trans women are alike. Everyone reacts to hormone replacement therapy in a different way, and as such there can be no predictions made as to how effective any of these changes will be.

\*While fat redistribution will occur over time, and fat stores will likely move to new and more feminine locations (generally butt, hips and breasts) this is not guaranteed. Additionally, existing fat will not move from it's current location on your body, and will need to be decreased through diet or exercise if so desired

\*\*For full removal of body and facial hair, laser hair removal and/or electrolysis will need to be undertaken in order to fully remove all traces of

hair. While hormone replacement therapy will slow the growth of hair, it will not remove the hair currently existing.

## Medications:

### Anti-androgens

Variety	Form
Spironolactone	Oral pill
Cyproterone	Oral pill
Finasteride	Oral pill
Dutasteride	Oral pill

### Effects:

Effects of anti-androgens on their own include:

- Slowing of growth and softening of facial and body hair
- Reduction of spontaneous erections and morning erections
- Slowing the effects of male pattern baldness
- Reduction in size of testicles and possible atrophy
- Reduction in sex drive

Most of these effects are reversible in time if hormone replacement therapy is halted.



## Estrogen

Variety	Form
Oral Estradiol	Oral/Sublingual Pill
Transdermal Estradiol	Patch or cream
Intramuscular Estradiol Valerate	Injectable liquid

## Effects:

Effects of estrogen, when combined with anti-androgen include:

- Breast development
- Rounding of hips
- Softening of skin
- Redistribution of fat storage in the body
- Emotional changes

## Hormone monitoring

Test	Baseline	1 month	3 months	6 months	12 months
CBC	X	X	X	X	X
ALT/AST	X	X	X	X	X
CREATININE/LYTES/UREA	X				X
FASTING GLUCOSE		X			X
LDL/HDL/TG	X			X	X
TESTOSTERONE (+/- ESTRADIOL)	X	X	X	X	X
PROLACTIN	X				
LH	X				
OTHER	HEP ABC				

These are the recommended baseline tests your doctor should undertake in order to ensure a maintained level of health throughout your treatment. In addition to blood work, work with your physician to monitor your physical changes as well. A full physical is encouraged at the baseline point, and continued monitoring of body proportions, height, weight, EKG and cardio stress factors should be undertaken at the 3 month intervals as well as bloodwork analysis.



An endocrinologist with WPATH or trans related health care training is also recommended if at all possible, to ensure hormones levels are maintaining at healthy levels.

Dosage of medication should be monitored and modified slowly over time. Estrogen is recommended to increase after 3-6 months, depending on estrogen levels.