

Physical Effects of Feminizing Hormone Therapy

Feminizing hormone therapy can involve testosterone blocking medication alone, estrogen medication alone, or testosterone blocking medication along with estrogen. Testosterone blockers are not needed for individuals who have received an orchiectomy (removal of testes). Some individuals who have not received an orchiectomy may desire to block testosterone without the addition of estrogen; however, testosterone blockers alone are not considered safe for longer periods of time. There is also debate and conflicting reports as to whether adding progesterone results in additional feminization.

Most physical changes associated with feminizing hormone therapy occur over the course of approximately two years. However, the amount of change and the exact timeline of effects can be highly variable. Factors that influence the amount and timeline of changes include inheritance (genetic influences passed down from biological parents), age, health status, lifestyle, and dosage (amount, frequency, route of administration). Taking testosterone blocking medication alone typically leads to sex drive, fertility, and face/body hair changes only. Sometimes slight breast growth is also noted with Testosterone blocking medication alone.

The table below outlines the approximate time course of these physical changes.

TABLE 1: Effects and Expected Time Course of Feminizing Hormones

	Expected Onset	Maximum Effect	Reversible?	Comments
Decreased Sex Drive	1-3 months	1-2 years	Yes	<ul style="list-style-type: none"> • Fewer spontaneous and morning erections • Can make penetrative sex more difficult as the insertive partner
Emotional Changes	1-3 months		Yes	<ul style="list-style-type: none"> • Highly variable person to person • May experience broader range of emotions
Fertility	Varies		Likely, although prolonged use may decrease fertility	<ul style="list-style-type: none"> • Less semen and ejaculatory fluid is produced • Sperm may no longer reach maturity • Ongoing birth control still recommended
Decreased Muscle Mass/ Strength	3-6 months	1-2 years	Yes	<ul style="list-style-type: none"> • Depends on amount of exercise
Breast Growth	3-6 months	2-3 years	No, although atrophy of breast tissue may occur	<ul style="list-style-type: none"> • Size varies person to person and depends on inheritance • Typically A to B cup
Decreased Testicular	3-6 months	2-3 years	Maybe	<ul style="list-style-type: none"> • Testes shrink to approximately half of initial size

Volume				
Body Fat Re-Distribution	3-6 months	2-5 years	Yes	<ul style="list-style-type: none"> • Less abdominal fat • More fat in hips, thighs, buttocks
Skin Softening	3-6 months		Yes	<ul style="list-style-type: none"> • Skin also becomes less oily
Face/body hair changes	6-12 months		No	<ul style="list-style-type: none"> • Hair follicles will continue to produce hair • Hair may grow more slowly and be thinner/less noticeable • Male pattern baldness may stop or slow down but hair already lost does will likely not grow back

Inheritance (genetic influences passed down from biological parents), age, health status, lifestyle, and dosage (amount, frequency, route of administration) also impact the likelihood of experiencing negative side effects associated with feminizing hormone therapy. Your healthcare provider will collect information regarding your history, as well as your biological family's history, in order to provide more specific feedback regarding your risks prior to starting hormone therapy. Regular follow-up appointments are critical to monitoring your health and risk over time.

The table below outlines the common risks associated with feminizing hormones, including factors that may reduce these risks.

TABLE 2: Risks Associated with Masculinizing Hormones

Increased Risk Likely	Venous thromboembolic disease (blood clots)	<ul style="list-style-type: none"> • A blood clot that travels to the lungs can create a life-threatening pulmonary embolism • Surgery/hospitalization, high cholesterol, hypertension, diabetes, cigarette smoking can increase risk
	Hypertriglyceridemia (elevation of triglycerides in blood)	<ul style="list-style-type: none"> • Can increase risk of cardiovascular disease • Very high levels can increase risk of acute pancreatitis
	Weight gain	<ul style="list-style-type: none"> • Regular exercise can reduce risk
	Elevated liver enzymes	<ul style="list-style-type: none"> • Monitored via periodic blood tests
	Gallstones	<ul style="list-style-type: none"> • May not cause symptoms
Increased Risk Likely with Additional Risk Factors Present	Cardiovascular disease (heart disease)	<ul style="list-style-type: none"> • Healthy eating, exercise, and not smoking tobacco can decrease risk
Possible Increased Risk	Hypertension (high blood pressure)	<ul style="list-style-type: none"> • Risk increases with estrogen but can decrease with the testosterone blocker

		sprinolactone <ul style="list-style-type: none"> • Hypertension increases risk of heart attack or stroke • Healthy eating, exercise, and not smoking tobacco can decrease risk • Medications can help manage symptoms
	Hyperprolactinemia (elevated prolactin in blood) or prolactinoma (noncancerous pituitary gland tumor)	<ul style="list-style-type: none"> • Risk appears limited to the first year of treatment
Increased Risk Possible with Additional Risk Factors Present	Type 2 diabetes	<ul style="list-style-type: none"> • Healthy eating, exercise, and maintaining a healthy weight can decrease risk
No Increased Risk	Breast cancer	<ul style="list-style-type: none"> • Risk still may be present

Information adapted from the World Professional Association for Transgender Health (WPATH) Standards of Care Version 7 (www.wpath.org) and the Endocrine Society Clinical Practice Guideline for Endocrine Treatment of Transsexual Persons (www.endocrine.org)