

Physical Effects of Masculinizing Hormone Therapy

Most physical changes associated with masculinizing 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).

It is important to note that increasing dosage does not necessarily speed up the process or result in more changes. In fact, high levels of testosterone are converted into estrogen by the body. Your healthcare provider can help select the right treatment for you. It is important to attend follow up appointments with this provider in order to monitor effects.

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

TABLE 1: Effects and Expected Time Course of Masculinizing Hormones

	Expected Onset	Maximum Effect	Reversible?	Comments
Skin Oiliness/Acne	1-6 months	1-2 years	Yes	<ul style="list-style-type: none"> • Acne may cause permanent scars • Medication can help manage symptoms
Increased Sex Drive	1-3 months		Yes	<ul style="list-style-type: none"> • Varies person to person • May involve other changes in sexuality (e.g., changes in the types of people you find attractive)
Emotional Changes			Yes	<ul style="list-style-type: none"> • Highly variable person to person • May experience more narrow range of emotions • May become irritable, frustrated, or angry more easily • Switching to weekly injections (versus biweekly) may help
Monthly Periods Stop	2-6 months		Yes, although prolonged use may decrease fertility	<ul style="list-style-type: none"> • Pregnancy may still be possible without regular periods
Clitoral Growth	3-6 months	1-2 years	Not likely	<ul style="list-style-type: none"> • Typical size is 1-3 cm
Thinning/Drying of Vaginal Lining	3-6 months	1-2 years	Possible	<ul style="list-style-type: none"> • May make penetration uncomfortable or more difficult • Lubrication products can help
Body Fat Re-Distribution	3-6 months	2-5 years	Yes	<ul style="list-style-type: none"> • More abdominal fat • Less fat in hips, thighs, buttocks
Facial/Body Hair Growth	3-6 months	3-5 years	Not likely	<ul style="list-style-type: none"> • Gradual growth of mustache/beard

				<ul style="list-style-type: none"> • Thicker/coarser hair on abdomen, chest, back, arms, and legs • Dependent on inheritance
Deepened Voice	3-12 months	1-2 years	No	<ul style="list-style-type: none"> • May not impact all aspects of speech • Working with speech/language pathologist may help
Increased Muscle Mass/ Strength	6-12 months	2-5 years	Yes	<ul style="list-style-type: none"> • Depends on amount of exercise
Male Pattern Baldness			Not likely	<ul style="list-style-type: none"> • Highly dependent on age and inheritance • Medications may help

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 masculinizing 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 masculinizing hormones, including factors that may reduce these risks.

TABLE 2: Risks Associated with Masculinizing Hormones

Increased Risk Likely	Polycythemia (increase in red blood cell volume)	<ul style="list-style-type: none"> • Donating blood can reduce risk
	Weight gain	<ul style="list-style-type: none"> • Healthy eating and regular exercise can reduce risk
	Acne	<ul style="list-style-type: none"> • Medications can help manage symptoms
	Male pattern balding	<ul style="list-style-type: none"> • Medications may help
	Sleep apnea (sleep disorder where breathing stops and starts)	<ul style="list-style-type: none"> • Maintaining healthy weight can reduce risk • Treatments are available to help manage symptoms
Increased Risk Possible	Elevated liver enzymes	<ul style="list-style-type: none"> • Orally-administered testosterone may increase this risk (vs. injectable forms) • Monitored via periodic blood tests
	Hyperlipidemia (high cholesterol/triglycerides)	<ul style="list-style-type: none"> • Healthy eating and regular exercise can decrease risk • Medications can help manage symptoms
Increased Risk Possible with Additional Risk Factors	Destabilization of mental health difficulties	<ul style="list-style-type: none"> • Risk appears to be linked to higher doses and/or higher blood

Present	(particularly those involving manic or psychotic symptoms)	levels of testosterone
	Cardiovascular disease (heart disease)	<ul style="list-style-type: none"> • Healthy eating, exercise, and not smoking tobacco can decrease risk
	Hypertension (high blood pressure)	<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
	Type 2 diabetes	<ul style="list-style-type: none"> • Healthy eating, exercise, and maintaining a healthy weight can decrease risk
No Increased Risk	Loss of bone density Breast cancer Cervical cancer Ovarian cancer Uterine cancer	<ul style="list-style-type: none"> • Risk still may be present • Hysterectomy and HPV vaccine may reduce this risk • Regular pap tests screen for cervical cancer • See a doctor if you experience changes in discharge/bleeding, pelvic/back pain, and/or bathroom habits

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)