

# Hormone therapy: Testosterone

## What is the goal of testosterone therapy?

- Testosterone has two main jobs: 1) It causes masculinizing changes to occur throughout the body, and 2) it suppresses the production of estrogen. Some of the changes caused by testosterone are permanent (they would remain if testosterone was stopped), and other changes are reversible.

## How is testosterone administered?

- Testosterone is available as injections, cream or gel. Injections are administered either every 2 weeks intramuscularly (into the muscle) or every week subcutaneously (under the skin). Nursing staff provides injection training here at clinic. Cream and gels are absorbed through the skin and are applied daily.

## What are the irreversible effects of testosterone?

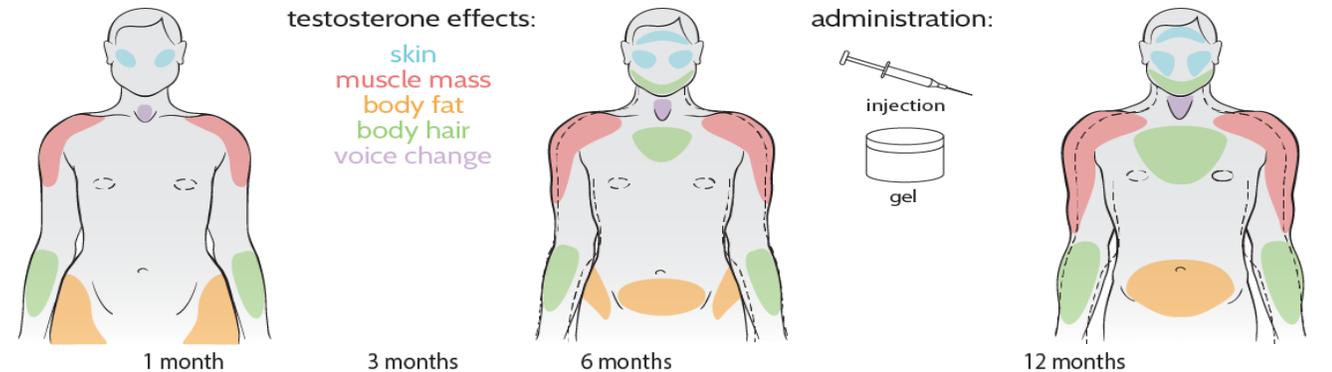
- Testosterone causes voice deepening, clitoral growth, body/facial hair growth, and sometimes male-pattern balding (also influenced by age, genetics). Testosterone may irreversibly affect fertility. Desires for fertility should be considered prior to starting hormones, and for those seeking fertility preservation (or education about fertility preservation), referrals can be made to Lurie's fertility preservation team.

## What are some of the reversible effects of testosterone?

- Testosterone causes increased muscle tone, fat redistribution (hips → stomach area), skin oiliness and acne. Mood changes (often irritability, having a "shorter fuse") and heightened sex drive may occur. Menstrual cycles will change and eventually stop after some time. There may be genital changes caused by low estrogen levels.

## What are some of the known side effects and risks of testosterone?

- Testosterone may increase your metabolic risk profile – that is, the risk for conditions such as heart disease, diabetes, high cholesterol or blood pressure. The risk for heart disease is higher for people who smoke cigarettes, are overweight or have a family history of heart disease.
- Testosterone causes hematocrit, the proportion of red blood cells in a volume of blood, to increase. This blood thickening, at high levels, can be life-threatening, causing stroke or a heart attack.
- Testosterone can also cause increased appetite, headaches and acne.



WHAT	WHAT HAPPENS	WHEN IT STARTS	COMPLETE EFFECT
skin	increased skin oiliness & acne	1-6 months	1-2 years
muscle	increased muscle mass & strength*	6-12 months	2-5 years
voice pitch	voice pitch deepens	6-12 months	1-2 years
body fat	body fat redistribution	3-6 months	2-5 years
hair growth	facial & body hair growth	6-12 months	3-5 years
menses	monthly periods stop	2-6 months	not applicable
clitoris	enlargement (~0.5"-1")	3-6 months	1-2 years
scalp hair	male-pattern hair loss **	> 12 months	variable

\* significantly dependant on amount of exercise  
 \*\* dependent on age & genetics, may be minimal  
 sex drive also increases

## How do we monitor for safety?

- Labs (bloodwork) are collected prior to starting hormones and every 3 months for the first year of treatment. In the second year labs are checked every 6 months. Tests that are monitored include cholesterol, liver tests, hematocrit and hormone levels. These labs can be drawn at Lurie's or at a local facility.

## How quickly will changes develop?

- Remember, it's normal to want to see changes occur rapidly, but (just like in puberty) these changes take time! Most changes start to begin ~3-6 months after starting testosterone and take years to fully develop.

## Will I look like my friend \_\_\_??

- Remember, everyone experiences puberty differently. Factors other than testosterone (such as genes!) affect appearance. It's impossible to predict exactly what changes will develop.
- It's important to take the prescribed dose of testosterone. Taking more increases health risks.
- Always tell your health care provider if you have questions or concerns about your health.