

Hormone therapy: Estrogen

What is the goal of estrogen therapy?

- Estrogen has two main jobs: 1) It causes feminizing changes throughout the body, and 2) it suppresses the production of testosterone. Some of the changes caused by estrogen are permanent (they would remain if estrogen was stopped), and other changes are not.

Is estrogen used alone?

- Estrogen may be used alone or together with other medications that either block production of testosterone ("puberty blockers," GnRH agonists) or block the effect of testosterone (these medications, ex. spironolactone, mainly slow hair growth).

How is estrogen administered?

- Estrogen is available as injections, patches, or pills. Injections are administered every 2 weeks intramuscularly (into the muscle). The estrogen patch releases estrogen through the skin and is replaced either once or twice weekly. This type of estrogen may have a lower risk of causing blood clots. Pills are taken daily.

What are the irreversible effects of estrogen?

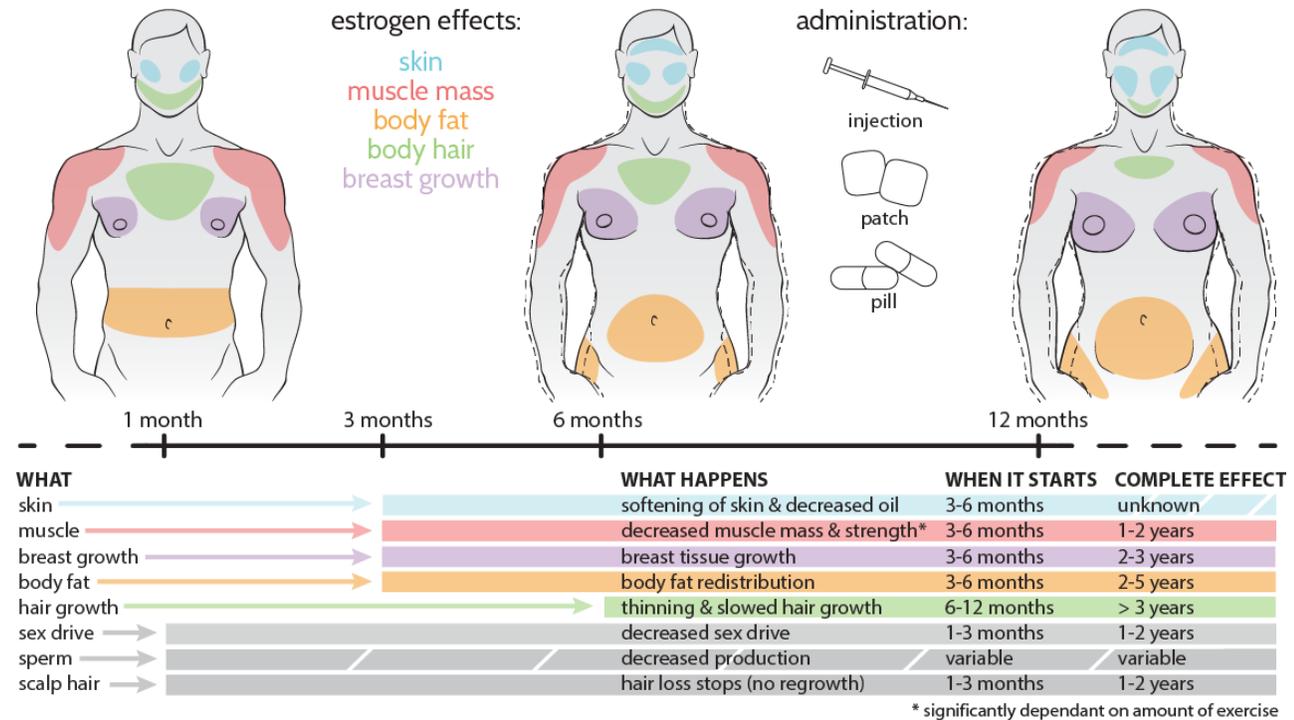
- Breast development caused by estrogen is permanent. Additionally, estrogen may irreversibly affect fertility. Desires for fertility should be considered prior to starting hormones, and for those seeking fertility preservation (or education about fertility preservation), referrals can be made to Lurie's fertility preservation team.

What are some of the reversible effects of estrogen?

- Estrogen causes skin softening, muscle tone reduction, fat redistribution, and slows the rate of hair growth. Estrogen decreases erections and may reduce sex drive.

What are some of the side effects and risks of estrogen?

- Estrogen may increase the risk for conditions such as heart disease, diabetes, high cholesterol or blood pressure. These risks are greater in smokers, people who are obese and in people with a family history of these conditions.
- Estrogen may cause blood clots, but this is relatively rare. Transdermal patches are recommended for people with high blood pressure or for cigarette smokers.
- Estrogen may cause increased appetite, nausea, mood changes or headaches. There are also some uncommon side effects your provider will discuss with you.



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 and hormone levels, including prolactin. These labs can be drawn at Lurie's or at a local facility.

How quickly will changes develop? Will I look like my friend ___?

- Remember, it's normal to want to see changes occur rapidly, but (just like in puberty) these changes take time! Some changes take years to fully develop.
- Everyone experiences puberty differently. For example, breast size and shape varies from person to person. Factors other than estrogen (genes!) affect appearance. It's impossible to predict exactly what changes will develop.
- The right dose of estrogen for you may be different than for someone else. Taking more estrogen than prescribed is not safe - it increases health risks.
- Always tell your health care provider if you have questions or concerns about your health.