

Draft 1

Can I expect my testes to grow when I take testosterone?

LH and FSH are needed for healthy testes to grow. Testosterone alone will not cause your testes to get bigger. If you don't have testes or they are very small and don't work, they may be removed and replaced with artificial ones that are about the size of and look like adult testes. This is something that you can talk to your doctor about if you want to know more.

Can I use a testosterone patch instead of taking injections?

When you first start taking testosterone, the dose is very low. Patches don't come in these low doses. Ask your doctor about the patch when you are on an adult dose, if you would like to use the patch.

Can testosterone be harmful?

Testosterone does not usually have serious side effects if it is taken as prescribed by your doctor. It can be harmful when taken in large doses (as when abused by some athletes). Before prescribing testosterone, your doctor will need to know what other medicine you take and what you are allergic to.

Testosterone can affect blood sugar levels in people with diabetes.

You may notice the side effects below. If they bother you, speak with your doctor or nurse. Your dose of testosterone may need to be adjusted:

- acne
- swelling, redness, or irritation at the site of the injection
- your breasts are growing
- more, or erections that are lasting longer
- headaches
- if you find that your behaviour is more aggressive for a few days after each injection

Testosterone is a controlled substance. It can be **harmful** if not taken **exactly** as prescribed.

Will I be able to father a child?

It is **unlikely** that you will be able to father a child if your testes are not healthy. You may be able to use a donor sperm to conceive a child with a female partner.

If you have healthy testes but no chemical message from the brain, you will likely need medicine to help you father a child. You can be given GnRH or LH/FSH by injection until your partner becomes pregnant.

Even though the chances of fathering a child naturally are not high, it is **not impossible**.

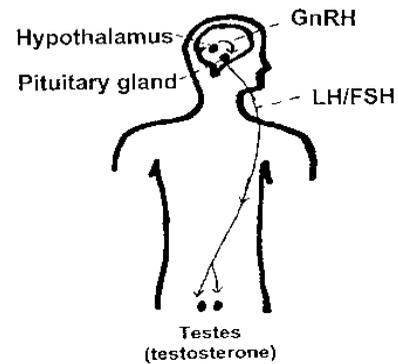
All young men who are sexually active should use condoms for birth control and prevent sexually transmitted infections.

health information

Hormone Replacement for Adolescent Boys

Why do I need hormone replacement?

The hormone **testosterone** is needed for your body to change from a boy's to a man's. This process is called **puberty**. Testosterone is made in the testes after they receive chemical messages from the brain. Your testosterone level may be low for one of three reasons:



1. Your testes may not have developed properly or in the right place (vanishing testis syndrome, congenital absence of the testes), or they may not be able to make testosterone (Klinefelter's syndrome, injury, infection such as mumps or damage from radiation or chemotherapy).
2. Your pituitary gland in your brain may not send a chemical (hormone) message to your testes to produce testosterone. The pituitary hormones are called LH and FSH. LH and FSH help the testes produce testosterone and sperm. Without these hormones, even healthy testes cannot make testosterone. This can happen if the pituitary gland is missing or if it is damaged because of a tumor, infection, surgery or radiation/chemotherapy.

3. Your hypothalamus in your brain may not be able to send its message (a hormone called GnRH) to the pituitary gland. This can happen after radiation to the brain or in Kallmann's syndrome. No GnRH means no LH and FSH are produced. No messages get to the testes. Neither testosterone nor sperm are produced.

Whatever the reason, the end result is the same—no testosterone.

What does testosterone do?

Testosterone affects the body in many ways. It:

- causes hair to grow under your arms and in your pubic area, makes muscles bigger and stronger, makes your voice deepen, and causes facial hair to grow
- makes the penis grow larger (you will also have erections, sometimes with wet dreams)
- works with other hormones to cause the growth spurt seen around puberty
- works with calcium to build stronger bones
- may cause your skin to become oilier (you may develop acne)
- causes you to be a sexual person—to have sexual thoughts and feelings
- may cause some breast growth. (Around half of normal boys have some breast growth in puberty. It usually goes away within 2 years.)

How is the missing testosterone replaced?

When you feel ready to begin puberty (usually when your friends are starting puberty or around 12 to 14 years), you and your doctor can decide to replace the missing testosterone.

Your doctor will want to use low doses at first so that your body will change slowly. You will have regular check-ups with your doctor. Your dose of testosterone will be adjusted when your body is ready.

After the first few doses, you will start to notice changes in your body like the ones listed in the section "What does testosterone do?" **You will have to take testosterone for the rest of your life.**

How is the testosterone given?

Testosterone is given as an injection into the muscle. The endocrine clinic nurse can give it, or you or your parents can learn to give the injections. At first, it is given every 4 weeks. The dose gradually increases over 2 to 3 years until you are on an adult dose. Adult doses are usually given every 2 weeks.

Testosterone is released slowly into your body after each injection. Sometimes, sexual thoughts and feelings are stronger right after the injection and decrease before the next injection is due. Your doctor will want to know how the testosterone is affecting you, and if you are feeling good about the changes. Your dose may need to be adjusted. **Please be honest about your feelings!**

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