
Understanding Male Hypogonadism

Male hypogonadism occurs when the male sex glands (testes) don't make enough of the male sex hormone testosterone, or don't make enough sperm, or both. Testosterone plays a major role in male growth and development during puberty. Some men are born with hypogonadism. In other cases, it occurs later in life and is caused by injury or infection. The condition can affect men at any age. Symptoms vary depending on how close to puberty the condition starts.

What causes male hypogonadism?

There are 2 main types: primary hypogonadism and secondary hypogonadism.

Primary hypogonadism

This occurs because of a problem that affects the testes. This problem may be caused by:

- Chemotherapy or radiation therapy for cancer
- Injury to the testicles
- Klinefelter syndrome, a chromosome defect
- Tumors
- Some kinds of autoimmune disorders
- Defects in 1 or more of the enzymes needed to make testosterone
- The testicles have not dropped down to their permanent position by the time a boy is 1 year old (undescended testicles)
- Too much iron in the blood (hemochromatosis)
- Inflammation caused by infections, such as mumps
- Alcohol and marijuana use

Secondary hypogonadism

This is caused by a problem with the pituitary gland or hypothalamus. These are parts of the brain that direct the testes to make testosterone. Conditions that can cause this type include:

- Pituitary tumors and the treatment used (surgery or radiation therapy)
- Head injury
- Kallmann syndrome, a rare genetic syndrome
- Certain medicines
- Use of anabolic steroids, alcohol, marijuana, or opioid pain medicines

Chronic infections associated with weight loss, such as HIV/AIDS

- Prader-Willi syndrome, a genetic disorder

Symptoms of male hypogonadism

If hypogonadism occurs before or during puberty, a boy's symptoms may include:

- Delayed puberty, such as:
 - Voice does not get deeper
 - Lack of muscle development
 - Penis, testes, and scrotum are not fully developed
 - Lack of pubic and underarm hair
 - No growth of body hair underarm, face, or groin
 - Arms and legs grow abnormally long
- Breasts may get bigger (gynecomastia)
- Low sperm count or no sperm, causing infertility

Adult men

For adult men, symptoms can include:

- Erectile dysfunction
- Lack of desire for sex
- Tiredness
- Low sperm count and small testes
- Inability to have children (infertility)
- Less muscle mass
- Mood changes
- Less body hair and beard growth
- Loss of bone mass (osteoporosis) and bone fractures
- More body fat
- Breast tissue development (gynecomastia)

Some of these symptoms can have other causes. So, a diagnosis often can't be made right away.

Diagnosing male hypogonadism

A healthcare provider will take a health history and do a complete exam. If a boy has developmental abnormalities or delayed puberty, the provider will check the boy's penis

and testes. This is done to see if they are at a normal stage for his age.

The provider will ask about symptoms. Many symptoms of male hypogonadism can be caused by other conditions. So, blood tests will be done to check your testosterone levels. Depending on the results, you may need another blood test. Or you may have other tests, such as:

- **Bone densitometry test.** This is done to check for osteoporosis.
- **Semen analysis.** This is done to rule out problems, such as not having any sperm. It also acts as a baseline sperm count.
- **Genetic studies.** This is done to see if you have an inherited condition that is lowering your testosterone.
- **Ultrasound of the testes.** This is done to check for growths or lumps.

Treatment for male hypogonadism

If the healthcare provider finds that an underlying disorder is the cause, then treatment will target that disorder. But the main treatment is replacing testosterone. This can be done in different ways. Talk with your provider about which method is best for you. Also ask what testing you need to be sure you get the right dose:

- **Topical.** Topical medicines are put on the skin. They come in creams, gels, liquids, and patches.
- **Shot (injection).** Testosterone shots can be given at different time intervals. Some shots are short-acting, and others are long-acting.
- **By mouth (oral).** The FDA has approved an oral testosterone capsule for the treatment of some kinds of hypogonadism. This medicine should not be used to treat age-related hypogonadism.
- **In the nose.** Testosterone gel is put into the nostrils.
- **Implanted pellets.** Testosterone pellets are placed under the skin. The medicine is slowly released over a few months.

For boys

One choice for boys is to wait and see if normal puberty development happens on its own. In some cases, it may just be stalled. But short-term, low-dose testosterone therapy may be used as a treatment for boys. This can help to get development started.

Living with male hypogonadism

It can be hard for boys and men to deal with this condition. Boys may feel awkward or depressed if their friends and classmates are going through puberty when they are not.

Men with hypogonadism may have less interest in sex. They may also have erectile dysfunction and be unable to have children (infertile). For many men, this can lead to feelings of low self-esteem and depression. They may also have less energy, mood changes, and memory problems.

Talk therapy (counseling) may be helpful for boys or men who feel worried or depressed about these issues.

When to call your healthcare provider

Boys or men who have any of the symptoms listed above should see their healthcare provider to discuss these issues.