



The Medical **Bulletin**

In Endocrinology

Male Hypogonadism – Diagnosis & Treatment

Continuing from the previous week-

Diagnosis

Early detection in boys can help prevent problems from delayed puberty. Early diagnosis and treatment in men offer better protection against osteoporosis and other related conditions.

Physical examination: sexual development, such as pubic hair, muscle mass and size of testes, consistent with the age.

Lab work Up: blood level of testosterone. Because testosterone levels vary and are generally highest in the morning, blood testing is usually done early in the day, before 10 a.m., possibly on more than one day.

If tests confirm low testosterone, further testing can determine if a testicular disorder or a pituitary abnormality is the cause. These studies might include:

- Hormone testing
- Semen analysis
- Pituitary imaging
- Genetic studies
- Testicular biopsy

TREATMENT

Adult Men

Male hypogonadism usually is treated with testosterone replacement to return testosterone levels to normal. Testosterone can help counter the signs and symptoms of male hypogonadism, such as decreased sexual desire, decreased energy, decreased facial and body hair, and loss of muscle mass and bone density.

For older men who have low testosterone and signs and symptoms of hypogonadism due to aging, the benefits of testosterone replacement are less clear.

Types of Testosterone Replacement Therapy

Oral testosterone preparations have not been used for treatment of hypogonadism because they can cause serious liver problems. Also, they don't keep testosterone levels steady.

One Food and Drug Administration-approved oral testosterone replacement preparation, testosterone undecanoate, is absorbed by the lymph system. It might avoid the liver problems seen with other oral forms of testosterone.



The Medical **Bulletin**

Other Preparations Include:

- **Gel.** There are several gels and solutions available, with different ways of applying them. Depending on the brand, you rub the testosterone into your skin on your upper arm or shoulder (AndroGel, Testim, Vogelxo) or apply it to the front and inner thigh (Fortesta).

Your body absorbs testosterone through your skin. Don't shower or bathe for several hours after a gel application, to be sure it gets absorbed.

Side effects include skin irritation and the possibility of transferring the medication to another person. Avoid skin-to-skin contact until the gel is completely dry, or cover the area after an application.

- **Injection.** Testosterone cypionate (Depo-Testosterone) and testosterone enanthate are given in a muscle or under the skin. Your symptoms might waver between doses depending on the frequency of injections.
- Testosterone undecanoate is given by deep intramuscular injection, typically every 10 weeks. It must be given at your provider's office and can have serious side effects.
- **Patch.** A patch containing testosterone (Androderm) is applied each night to your thighs or torso. A possible side effect is severe skin reaction.
- **Gum and Cheek (Buccal Cavity).** A small putty-like substance, gum-and-cheek testosterone replacement delivers testosterone through the natural depression above your top teeth where your gum meets your upper lip (buccal cavity).

This product, taken three times a day, sticks to your gumline and allows testosterone to be absorbed into your bloodstream. It can cause gum irritation.

- **Nasal.** This testosterone gel (Natesto) can be pumped into the nostrils. This option reduces the risk that medication will be transferred to another person through skin contact. Nasal-delivered testosterone must be applied twice in each nostril, three times daily, which might be more inconvenient than other delivery methods.
- **Implantable Pellets.** Testosterone-containing pellets (Testopel) are surgically implanted under the skin every three to six months. This requires an incision.

Testosterone therapy carries various risks, including:

- Increased production of red blood cells
- Acne
- Enlarged breasts
- Sleep disturbances
- Prostate enlargement
- Limited sperm production



The Medical **Bulletin**

Treatment of infertility due to hypogonadism

If a pituitary problem is the cause, pituitary hormones can be given to stimulate sperm production and restore fertility. A pituitary tumor may require surgical removal, medication, radiation or the replacement of other hormones.

There's often no effective treatment to restore fertility in men with primary hypogonadism, but assisted reproductive technology may be helpful. This technology covers a variety of techniques designed to help couples who have been unable to conceive.

Treatment for boys

Treatment of delayed puberty in boys depends on the underlying cause. Three to six months of testosterone supplementation given as an injection can stimulate puberty and the development of secondary sex characteristics, such as increased muscle mass, beard and pubic hair growth, and growth of the penis.

Coping and support

Having male hypogonadism can affect your self-image and, possibly, your relationships. Talk with your health care provider about how you can reduce the anxiety and stress that often accompany these conditions. Many men benefit from psychological or family counseling.

Find out if there are support groups in your area or online. Support groups put you in touch with other people with similar challenges.

Dr. Minal Mohit