

# Andropause

## Evaluation and management

## Testosterone replacement Therapy (TRT)

## Supportive care

## Andropause

**Testosterone is the hormone responsible for deep voices, muscle mass, and facial and body hair patterns found in males.** As men get older, the level of testosterone in the body and production of sperm gradually becomes lower, and they experience physical and psychological symptoms as a result of these low levels. This is part of the natural aging process and it is estimated that testosterone decreases about 10% every decade after men reach the age of 30.

**Andropause is a condition that is associated with the decrease in the male hormone testosterone.** It is unlike menopause in that the decrease in testosterone and the development of symptoms is more gradual than what occurs in women. Approximately 30% of men in their 50s will experience symptoms of andropause caused by low testosterone levels. A person experiencing andropause may have a number of symptoms related to the condition and could be at risk of other serious health conditions such as osteoporosis without proper treatment.

## Causes

**The decrease in testosterone is an important factor in men suspected of having andropause.** However, as men age, not only does the body start making less testosterone, but also the levels of another hormone called *sex hormone binding globulin* (SHBG), which pulls usable testosterone from the blood, begins to increase. SHBG binds some of the available testosterone circulating in the blood. The testosterone that is not bound to the SHBG hormone is called *bioavailable* testosterone, meaning it is available for use by the body.

Men who experience symptoms associated with andropause have lowered amounts of bioavailable testosterone in their blood. Therefore, tissues in the body that are stimulated by testosterone receive a lower amount of it, which may cause various physical and possibly mental changes in a person such as mood swings or fatigue.

## Symptoms and Complications

Although symptoms may vary from person to person, common symptoms of men going through andropause include:

- low sex drive
- difficulties getting erections or erections that are not as strong as usual
- lack of energy
- depression
- irritability and mood swings
- loss of strength or muscle mass
- increased body fat
- hot flashes

Complications associated with andropause include an increased risk of cardiovascular problems and osteoporosis (brittle bones).



## Diagnosis

If the above symptoms are present then, a blood test is performed to check the level of testosterone in the blood.

Because there are other conditions that are associated with low testosterone levels (e.g., *hypogonadism*, which causes retardation of sexual growth and development;

diabetes; high blood pressure) more tests will be required to rule out these possibilities before making a diagnosis of andropause.

It is important to note that many of the symptoms associated with andropause are also a normal part of aging, and they may not be reversible with treatment.

## Treatment and Prevention

**Replacing testosterone in the blood is the most common treatment for men going through andropause.** This treatment may provide relief from the symptoms and help improve the quality of life in many cases. Lifestyle changes such as increased exercise, stress reduction, and good nutrition also help. Your doctor will help you decide if testosterone treatment is right in your situation, as treatment does have risks.

**Testosterone is available in a variety of different preparations including skin patches, capsules, gels, and injections.** We will determine which treatment is best for you and will often consider your lifestyle when making this decision. Follow-up visits will be important after the initial treatment begins. At follow-up visits, we will check your response to the treatment and make adjustments, if necessary.

**Skin patches:** People who wear a patch containing testosterone receive the hormone through the skin. The patch allows a slow, steady release of testosterone into the blood stream. It is applied once a day to a dry area of skin on the back, abdomen, upper arms, or thighs.

**Testosterone gel:** This treatment is also applied directly to the skin, usually on the arms. Because the gel may transfer to other individuals through skin contact, a person must take care to wash the gel from the hands after each application. Additionally, unwashed clothing with medication traces should be kept out of reach of children.

**Capsules:** Taken twice daily after meals, this is yet another option for testosterone replacement. Men with liver disease, poor liver function, serious heart or kidney disease, or too much calcium in their blood should avoid testosterone capsules. It is the least effective of all the options

**Testosterone injections:** This treatment involves injections of testosterone (testosterone cypionate\* and testosterone enanthate) in the muscle every 2 to 4 weeks. They may cause mood swings due to changes in testosterone levels. Multiple visits where response will be assessed by assessing symptoms and the testosterone levels to determine ideal dosage and interval.

Testosterone should not be taken by any man with prostate or breast cancer. If you have heart disease, are taking some medications such as blood thinners, have an enlarged prostate, have kidney or liver disease, or have too much calcium in your blood, you will need to discuss with your doctor whether or not testosterone therapy is right for you.

