

Hypogonadism and testosterone replacement therapy

What is hypogonadism?

Hypogonadism is a lack of the male sex hormone testosterone and affects about 5 in every 1000 men. Testosterone is required by all men for a healthy life physically and psychologically. It is a hormone produced by the testes and is regulated by the pituitary gland and hypothalamus in the brain.

Hypogonadism in men can be due to a problem with the testes themselves or the pituitary gland or hypothalamus. This includes disorders of the testes such as Klinefelter's syndrome (a genetic disorder), inflammation of the testes (orchitis), radiation or chemotherapy and alcohol abuse. Removal of both testicles, injury to both testicles and undescended testicles are all causes of hypogonadism. Any disease of the pituitary gland or hypothalamus can also result in hypogonadism.

What are the symptoms of hypogonadism?

- Fatigue and lethargy.
- Depression, anxiety, irritability.
- Reduced sex drive, erectile dysfunction.
- Decreased shaving frequency.
- Reduced exercise tolerance and strength.
- Excessive sweating and night sweats.
- Poor concentration and/or memory.

What are the long term risks of hypogonadism?

Osteoporosis (brittle bones) can occur, leading to increased risk of hip and spine fractures.

How is it treated?

Treatment is aimed at restoring the normal level of testosterone to improve wellbeing, sexual function, quality of life and to prevent development of osteoporosis. There are now several preparations of testosterone available, all of which require a doctor's prescription. The table overleaf lists the types commonly available and the benefits and risks of each.

What are the side effects of treatment?

Occasional side effects include:

- Spots, usually on the back or chest.
- Prolonged painful erection.
- Thickening of blood by overproduction of red blood cells.
- Disturbed liver function.
- Aggression.
- There is no conclusive evidence to link testosterone treatment to an increased risk of prostate cancer but monitoring your PSA level (a marker of prostate cancer) is still recommended.

Whichever type of testosterone replacement therapy you take, you will need blood tests at regular intervals to check testosterone levels and ensure you do not develop potentially serious side effects of treatment.

Available testosterone preparations

Preparation	Advantages	Disadvantages
Testosterone Gel (<i>Testogel, Testim, Tostran</i>): this is a clear gel which is rubbed onto the shoulders, chest or back once a day. It dries within a few minutes.	<ul style="list-style-type: none"> • Stable blood levels of testosterone throughout the day. • No operation necessary. 	<ul style="list-style-type: none"> • Skin irritation (rare). • Testosterone may be transferred to partner by touch.
Testosterone injection (<i>Nebido</i>): this is injected deep intramuscularly in the buttocks every three months.	<ul style="list-style-type: none"> • Steady level of testosterone for up to three months. 	<ul style="list-style-type: none"> • Local pain.

How is the treatment monitored?

- Baseline blood tests would be done before initiating the treatment. These include full blood count, PSA, liver function, testosterone and lipid profile.
- You will be reviewed after three months, and then every year. Your review will include checking on your symptoms and looking at any potential side effects of the therapy. You will also have regular checks, including a full blood count, PSA, lipid profile, liver function, testosterone levels and blood pressure. The doctor may also examine your prostate gland via a rectal (back passage) examination.

Where can I learn more?

Contact the Pituitary Foundation at:

Pituitary Foundation

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Websites: www.pituitary.org.uk

For further information about the hospital, visit the Trust website www.royalberkshire.nhs.uk

This document can be made available in other languages and formats upon request.

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Reviewed: January 2019

Review due: January 2021