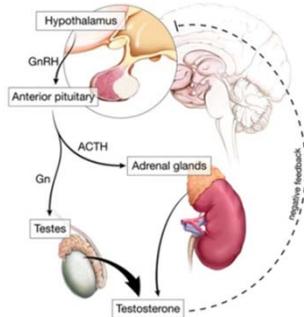


Testosterone Replacement Therapy (TRT)

What is Testosterone?

Testosterone is a hormone produced by the testicles and regulated by hormones released from the brain. It is responsible for the development of sexual characteristics in men. It also helps maintain muscle bulk, adequate levels of red blood cells, bone growth, and sexual function.



What causes Low-Testosterone (Low-T)?

- Male hypogonadism (inadequate production of testosterone) may be present at birth.
- Testosterone declines with age
- Other causes of low testosterone include injury or infection of the testicles, cancer therapy, dysfunction of the pituitary gland, steroid drugs, alcoholism, and obesity.

Symptoms of Low-T:

- Decreased libido
- Feeling tired, especially at the end of day
- Gynecomastia (breast development)
- Reduced muscle strength and bulk
- Decreased endurance / stamina
- Low bone mineral density and height loss

Important Facts:

- Testosterone replacement **does not** directly improve erections though it does improve desire (libido).
- Testosterone replacement **does not** cause prostate cancer but it may stimulate its growth, if present.
- Testosterone replacement **will not** overcome the effects of an unhealthy diet, lack of exercise or excessive alcohol use.

Men Who Should be Cautious about taking Testosterone:

- Men treated for prostate cancer by techniques other than surgery (e.g. radiation therapy, cryotherapy, HIFU)
- Men with a detectable PSA after prostate removal.
- Men with an elevated PSA
- Men at high risk for prostate cancer (e.g. previously diagnosed with high grade PIN, positive family history, African American with elevated PSA)

Precautions for TRT

- 1) Read the full prescribing information before starting
- 2) If using gel:
 - Wash hands immediately after application
 - Allow to dry before cover the area with clothing
 - Do not shower for 2 hours after application
 - Do not allow application site to come into contact with women or children. If contact is anticipated shower or wash the application area.

How do you know if you need testosterone replacement therapy (TRT)?

- If testosterone deficiency is suspected, your physician should measure your early morning total testosterone level.
- If the level is below 300 ng/dL, the test should be repeated 2x at the same lab.
- If levels remain low, get evaluated for pituitary or testicular disease.
- If the above conditions are ruled out, primary late-onset hypogonadism may be diagnosed and testosterone treatment may be considered.

Benefits of testosterone replacement therapy (TRT):

- Normal interest in sex
- Normal muscle strength and mass
- Normal energy
- Decreased fat mass
- Feeling less depressed or irritable

Possible side-effects:

- Increased red blood cell count
- Acne
- Gynecomastia (usually transient)
- Enlarged prostate (BPH)
- Worsening sleep apnea

Clinical Evidence:

The significance of testosterone decline is controversial and poorly understood. Consult with your physician if you are experiencing symptoms of Low-T to determine your best course of action.

Product	Frequency	Site
Injection	Every 1-3 wks	
Patch	Daily	Non-genital skin
Androgel (gel)	Daily	Upper chest/shoulders
Testim (gel)	Daily	Shoulders, chest, trunk
Fortesta (gel)	Daily	Front & inner thighs
Axiron (gel)	Daily	Under arms
Testopel implant	Every 4 to 6 months	Inserted subcutaneously in the buttocks, lower abdomen or thigh

Follow-Up:

- Should have testosterone and other lab work 14 days and 35 days after starting therapy. Lab work should be drawn in the morning 2 hours after dosing.