

Benefits vs. Risks of TRT (testosterone replacement therapy)

Note: Testosterone replacement therapy (TRT) is a potentially long term therapy to maintain symptom relief. You **DO NOT** stimulate your own production of testosterone with testosterone replacement therapy. Testosterone replacement therapy will actually decrease your natural (endogenous) production. If you have symptom relief with treatment and then stop, your symptoms will likely return.

Benefits that men report with testosterone therapy (individual results vary):

- **Improved body composition; increased lean muscle, improved strength, decreased fat. Some men report improved recovery times from exercise.**
- **More energy, less fatigue**
- **Improved libido (sex drive)**
- **Improved erectile function**
- **Improved mood**
- **Improved cognitive function (better mental focus)**
- **Better mood**
- **Increased bone density (thicker, stronger bone)**
- **Decrease on some depression/anxiety symptoms**

Possible side effects with testosterone replacement:

- **Increased red blood cells:** testosterone replacement therapy can increase the production of red blood cells (RBCs). If red cell counts become elevated there is a concern that this might place you at an increased risk for blood clots. Blood clots can cause incidents such as heart attack, stroke, or clots in the lungs or legs. These red cell counts are monitored frequently while on testosterone replacement. Historically, if the labs used to monitor for this elevation show an increase, the dose of testosterone is decreased or patients are advised to make a blood donation if possible. The evidence for TRT leading to increased risk for clots is weak. Despite the weak evidence we will treat this concern as a more serious risk. Further discussion on this topic can be had with your National TRT Clinics medical provider.
- **Prostate effects:** While rare, testosterone therapy may increase the size of the prostate gland and as a result could cause problems such as a weak urinary

stream, more frequent urination, or a more urgent need to urinate. The evidence for this concern is weak. Though, if any of these symptoms develop you should inform your healthcare provider at National TRT Clinics.

Although **there is no good evidence that points to testosterone replacement causing increased incidence of prostate cancer**, careful monitoring for prostate cancer through PSA testing will be offered/discussed. This is due to the concern that testosterone therapy could contribute to the growth (allow to live more easily) of an existing prostate cancer or a prostate cancer that might develop later in life.

- **Skin reactions:** Acne and/or oily skin can occur with testosterone replacement. If this does occur, over the counter cleansers like Clearasil are recommended. If there is little improvement with this approach we then will consider prescription acne medications for treatment.
- **Infertility & testicular shrinkage:** Testosterone replacement can decrease your sperm counts significantly and thus cause infertility (inability to have a child). If you desire to father a child now or anytime in the near future, we recommend against testosterone replacement. In some cases other medications that help support fertility can be taken with testosterone in order to possibly help maintain fertility. The risks vs. benefits of this approach will need to be discussed in detail with prospective patient.

Testosterone therapy can cause a decrease in the size of the testicles. Other than infertility risk, a shrinkage of testes in of itself is not dangerous or a sign that needs to be worried about. The size of the penis is not effected by testosterone replacement.

- **Alternatives to TRT:** It's important you're aware that alternative therapies to TRT exist, such as Clomid or HCG, which can increase your low testosterone levels. These therapies work by stimulating the testicles to produce more testosterone. Though depending on the cause of your low testosterone levels these treatments may or may not be effective. Likelihood of effectiveness can be determined with lab work.
- **Sleep apnea concerns:** Testosterone replacement could possibly worsen an existing sleep apnea. Evidence for this concern is weak. If you are currently being treated for OSA (obstructive sleep apnea), you should continue your current treatment while on testosterone therapy. If you develop trouble with sleep (ex. more snoring, frequent awakenings, etc.) while on testosterone replacement you should inform your healthcare provider at National TRT Clinics.
- **Fluid retention:** Some men retain fluid after starting testosterone replacement. You might notice this as an increase in your weight and/or swelling in the legs. This fluid retention can be caused by testosterone itself and/or estrogen.

Remember, some testosterone will naturally convert into estrogen. Fluid retention is most often temporary and not a concern for the average healthy adult.

Typically fluid gains will resolve within 2-3 months without intervention. Please inform your National TRT Clinics provider if you believe you are retaining fluid.

- **Breast enlargement/tenderness:** Breast tenderness and/or enlargement can occur if estrogen levels remain high for an extended period of time. (Estrogen levels rise with testosterone replacement because some testosterone will convert into estrogen. Extra body fat tends to increase the conversion of additional testosterone into estrogen) It's important to note that the development of gynecomastia (glandular breast growth) while on TRT is rare. Risk is most increased when there is an inappropriate ratio of estrogen to testosterone (i.e. higher estrogen and lower testosterone). The odds of developing gynecomastia are very low when TRT is managed by a knowledgeable medical provider. If estrogen levels rise too high and cause symptoms an estrogen reducing medication or blocker may be considered. ***though keep in mind that when we lower estradiol levels we are reducing the benefits that estrogen offers to our health***
- **Mood changes:** Irritability, moodiness, or other negative mood changes could occur if your testosterone levels become too high, or if your estrogen levels become too high, or if both become too high. This is rare and may happen in a select group of men when testosterone or estrogen levels rise very quickly. You should inform your healthcare provider at National TRT Clinics if you notice any negative mood changes.

Starting then stopping TRT (testosterone replacement therapy)

Many men will ask what happens if they start TRT then for whatever reason decide to stop. This is a common question and the answer is not straightforward. There is often a "reboot" period of, on average, a few months (2-3) before testosterone levels return to near what they were before beginning TRT. During this time your testosterone levels will be low and you might be more symptomatic than you were prior to starting TRT. Most men will go back to their "normal" level (what they were prior to starting testosterone therapy) after this "reboot" period. Though there is no guarantee and there is always a small chance that testosterone levels will not return to baseline.