



Three Reasons to Avoid Testosterone Boosters

I recently did some research on testosterone boosters for a private client, and what I found out was somewhat disturbing. Here are at least three reasons to avoid testosterone boosters.

Testosterone boosters: what they are

Testosterone is the hormone that gives men their primary and secondary sex characteristics: fertility, the ability to get an erection, more muscle, body hair, low voice, and psychological traits like aggressiveness and risk-taking.

Having an optimal testosterone level is a good thing. It [improves health](#), increases self-confidence, and all-around improves quality of life.

Testosterone (T, from here on out) levels have been subject to two types of decline.

As men age, their T levels generally decline, although [some “exceptionally healthy men” may have high levels into their 9th decade.](#)

And there’s been a long-term decline in T levels over the years, meaning that a man of, say, age 40, has lower T than did a man the same age 30 years ago.

Given these facts, lots of men would like to boost their T levels.

It’s possible to boost T, but it depends. We’ll go into that in this article.

The market has responded robustly to the demand for boosting T. It wouldn’t surprise me if there are hundreds of T-boosting products.

If you're a supplement company, this field is an absolute gold mine. T-boosters are generally quite expensive, and the kind of men who want to boost their T often have disposable income, so ~~blowing~~ spending a few hundred annually on T supplements isn't a big deal.

T boosters: do they work?

A good deal of scientific research into increasing testosterone has been done.

For example, magnesium and zinc can increase T, but a big caveat comes with that: you must be deficient in these minerals.

If you're not deficient, these minerals won't increase your T. And if you eat and train right as I discuss on this site, you won't be deficient, absent some huge other problem, like alcohol abuse.

For example, studies done in Iran and [Turkey](#) have found that magnesium and zinc may boost T. Many men are deficient in those countries. (Not surprisingly, since bread makes up a large fraction of calories.)

ZMA, a supplement that contains zinc, magnesium, and aspartate, has been [disappointing](#). ([Also.](#))

Boron is another mineral used in T boosters, and has had mixed results. Again, if you're not deficient, it won't make a difference.

Many T boosters contain herbal mixtures, such as ashwagandha, Tribullis terrestris, bulbine, maca, horny goat weed, and others. Some of these have better records than others.

Ashwagandha may be the best one of this bunch, [increasing and improving semen parameters and T levels](#).

Ashwagandha is also an ancient medicine, which might give us more confidence in its safety.

Many of the others show mixed results or even decidedly negative results.

[Bulbine has anabolic and androgenic activity in rats](#). I'm not aware of any human studies as to efficacy and safety.

[Tribulus was underwhelming when tested in animals. No effect on body composition in humans. The aphrodisiac herb Tribulus terrestris does not influence androgen production in young men.](#)

Lots of T boosters contain Tribulus, and it does little to nothing.

So, these herbal mixtures have a mixed record, and as for their safety, we'll discuss that below.

D-aspartic acid

Many T boosters use d-aspartic acid, a “D” amino acid in contrast to most of those in the human body, which are “L” amino acids. The D and L refer to [chirality](#).

[D- aspartic acid, also known as D-aspartate, appears to boost T in humans.](#)

However, there’s some suggestion that d-aspartate could act as an excitotoxin, that is, a toxin that kills neurons at high enough doses.

[The brain has receptors for NMDA, or n-methyl d-aspartate](#), and d-aspartate could act on them and cause excitotoxicity. L-aspartate, while an amino acid present in foods, may cause excitotoxicity if ingested in high enough doses and without other amino acids, i.e. protein in food, present. ([See here](#).)

There’s enough uncertainty in all of this that makes it difficult or impossible to declare that d-aspartic acid is dangerous.

But let me put it this way: I won’t be taking any T booster that contains d-aspartic acid, and you probably shouldn’t either. Caution is in order.

Adverse effects

So many of these T boosters are either ineffective, unknown if effective, effective only if you are deficient in essential minerals, or possibly excitotoxic.

There have been reports of adverse events with T boosters.

[Acute Psychotic Episode Associated with the Intake of a Testosterone-Enhancer Herbal Mixture Purchased Online.](#)

[Sexual Enhancement Products for Sale Online: Raising Awareness of the Psychoactive Effects of Yohimbine, Maca, Horny Goat Weed, and *Ginkgo biloba*.](#)
From the article:

The most common sexual enhancement products available on the Internet were identified. Their active ingredients included yohimbine, maca, horny goat weed and *Ginkgo biloba*. These four substances were reported with the occurrence of **adverse events and the induction of psychological symptoms, such as mood changes, anxiety, and hallucinations** as well as addictive behaviours. *Conclusions*. Uncontrolled availability of sexual enhancement products that contain potentially harmful substances is a major public health concern.

Bottom line

Testosterone boosters are generally expensive, of doubtful value, and may

cause adverse effects.

I won't be taking any of them any time soon, and absent much more clarity on their safety and effectiveness, I don't recommend them to anyone else either.

How to really increase testosterone

The best way to raise T is to be in good health. The following interventions specifically impact on testosterone:

1. **Exercise:** good body composition is associated with higher T. Lose the fat and gain muscle. Do resistance training
2. **Sleep:** [A single night of lost sleep can drop T levels precipitously. Get 7-8 hours sleep.](#)
3. **Weight loss:** Obesity is associated with low T. Don't be obese.
4. **Diet:** Don't use seed oils, as they lead to ingestion of high amounts of [omega-6 fatty acids, which lead to male infertility and low T](#). No ultra-processed food.
5. **Alcohol:** Consumption of large amounts of alcohol leads to increased aromatase expression leading to higher estradiol and lower T. Be moderate or don't drink.
6. **Vitamin D:** Associated with low T, and [supplementing with D increases T](#). Get some sunshine or take vitamin D.

If after all this, your T is still low, see a doctor and get the real deal, that's my advice.

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PS: [Check out my current supplement stack.](#)