LIVING WELL

What Testosterone Claims Leave Out

Testosterone can affect health, but claims about food, supplements, hair and hormone therapy often run far ahead of the evidence.

One hormone, too many promises

You encounter testosterone as an explanation for nearly everything: the food you eat, the supplements you take, the hair you lose and the health problems that arrive with age. The message is usually simple. Raise testosterone and things improve; lower it and things fall apart. The evidence supplied here tells a much less convenient story.

Low testosterone is a health condition, not merely a disappointing number or a marketing prompt. That distinction matters because testosterone therapy has potential benefits and potential risks. If you suspect a hormone problem, the sensible next move is medical care rather than trying to manipulate testosterone through an extreme diet or an unexamined supplement.

There is another reason to slow down. Men are more likely than women to put off checkups and medical care, while early diagnosis can make major health risks easier to treat. A testosterone claim can therefore distract in two directions: it may persuade you to treat yourself, or encourage you to treat one hormone as the answer to a broader health concern.

The harder question is not whether testosterone matters. It does. The question is whether a particular claim has been tested in people like you, whether the change was beneficial, and what else happened at the same time. That is where confident slogans begin to come apart.

Therapy can help and harm

The clearest lesson comes from studies of older men who already had low testosterone levels. In a 2017 series of studies, testosterone gel appeared to improve anemia, a deficiency of red blood cells. That is a specific potential benefit in a specific group. It is not evidence that testosterone gel generally makes healthy people feel or perform better.

The same research produced a less reassuring finding. Older men with low testosterone who used the gel had a higher risk of coronary artery plaque, which is linked to heart disease. The studies therefore did not deliver the tidy verdict that hormone marketing prefers. A measurable benefit and a concerning change appeared in the same body of research.

A treatment can do something useful without being an uncomplicated good. It can also produce a biological change without proving that everyone should pursue that change. In these studies, the participants were older men with low testosterone. Applying the result to somebody outside that group would go beyond what the evidence establishes.

The studies said that testosterone gel appeared to improve anemia and may increase heart-disease risk; they did not settle every question about long-term benefit or harm. If therapy is being discussed, anemia and coronary artery plaque belong in the conversation. So does the reason treatment is being considered. This is the point at which testosterone stops being a lifestyle experiment and becomes a medical decision.

Evidence that correcting a deficiency helps is not evidence that more helps everyone.

Protein headlines lose the plot

Diet claims often depend on one alarming result stripped of its boundaries. A meta-analysis found that low-carbohydrate diets that were extremely high in protein decreased men's total testosterone. Discussion of that finding often shortened "extremely high protein" to "high protein," making the result sound much broader than it was.

A 2023 analysis restored the missing context. It divided protein intake into categories and concluded that very high-protein diets appeared to decrease testosterone, while the high- and moderate-protein diets it examined did not. In other words, the label mattered less than what researchers actually meant by it.

That distinction changes the claim. The evidence does not support saying that any diet described as high in protein lowers testosterone. It supports a narrower statement about unusually high protein intake in the diets examined. Nor does a testosterone change, by itself, establish what that diet would mean for every other aspect of health.

The useful habit here is to inspect the boundaries of a headline. Was the diet merely higher in protein, or at the extreme end of the review's categories? Was it also low in carbohydrate? If those details disappear, the resulting claim may still sound scientific while saying something the analysis did not find.

Zinc is not a universal fix

Zinc offers an equally instructive example. A 2023 systematic review concluded that zinc deficiency reduces testosterone and that supplementation improves testosterone. It also found a positive correlation between serum zinc and total testosterone. Read alone, those

sentences sound like a straightforward argument for supplementation.

Now look at the evidence underneath them. The review included 38 papers, but 30 were animal studies and only eight were clinical studies. Animal research can form part of an evidence base, but it is not the same as a large collection of trials showing what routinely happens when people take a supplement.

The review also said that the size of the effect may depend on starting zinc and testosterone levels, the form and amount of zinc, and how long supplementation continues. That is not a universal promise. It suggests that your starting position matters, particularly whether zinc deficiency is present.

The hardest line is also the most useful: evidence that correcting a deficiency helps is not evidence that more helps everyone. The supplied review supports a relationship between zinc and testosterone, but it does not justify treating zinc as a guaranteed testosterone solution for any person who buys it.

Hair loss reveals the confusion

Testosterone claims can become especially muddled around hair. Male pattern hair loss is mediated by dihydrotestosterone, a potent form of testosterone. That does not make hair loss a simple report card for "high testosterone," nor does it mean that raising testosterone is a hair-growth strategy.

A 2017 systematic review and meta-analysis examined randomized controlled trials of nonsurgical treatments for androgenetic alopecia. It found that minoxidil, finasteride and low-level laser light therapy were superior to placebo for promoting hair growth in men. The United States Food and Drug Administration (FDA) had approved minoxidil and finasteride for this use and cleared the laser device.

There were limits. The studies showed high heterogeneity, meaning their results varied considerably, and some other treatments could not be included because suitable data were lacking. Still, the review points toward treatments tested for the hair condition itself-not toward generic promises to "balance" testosterone.

This is a useful model for judging hormone claims. Begin with the outcome you actually care about, then ask whether the proposed action was tested for that outcome. A claim about changing testosterone is not automatically evidence for improving anemia, protecting the heart or growing hair. Those are separate questions, and they require separate evidence.

Take three questions to Monday

On Monday, choose the single testosterone claim that is most likely to change what you do. Perhaps it concerns therapy, zinc, a protein-heavy diet or hair loss. Reduce it to one plain sentence: what action is being proposed, for whom, and what result is being promised?

Then test it with three questions. Was the evidence from people or mostly from animals? Did participants have low testosterone, anemia, zinc deficiency or male pattern hair loss? Did researchers measure the result you care about, or only a change in testosterone? You do not need to resolve uncertainty by pretending it is certainty.

If the claim would lead you to start testosterone therapy, take a supplement for a suspected deficiency or avoid medical care, bring those three questions to a health professional. Ask what evidence applies to your situation, what benefit is being sought and what risks need discussing. This step takes an appointment and a direct conversation, not a hormone slogan.

Your task for the next week is small: interrogate one claim before acting on it. If its promise survives only after the population, limits or unwanted findings are removed, it has not earned your decision.

Where this comes from

- Men's Health

  MedlinePlus, U.S. National Library of Medicine · https://medlineplus.gov/menshealth.html
- Testosterone gel supplements appear to improve anemia in older men, but may increase risk of heart disease

  National Heart, Lung, and Blood Institute · https://www.nhlbi.nih.gov/news/2017/testosterone-gel-supplements-appear-improve-anemia-older-men-may-increase-risk
- High-protein diets and testosterone.

  Nutrition and health, 2023 · https://pubmed.ncbi.nlm.nih.gov/36266956/
- Correlation between serum zinc and testosterone: A systematic review.

  Journal of trace elements in medicine and biology : organ of the Society for Minerals and Trace Elements (GMS), 2023 · https://pubmed.ncbi.nlm.nih.gov/36577241/
- The effectiveness of treatments for androgenetic alopecia: A systematic review and meta-analysis.

  Journal of the American Academy of Dermatology, 2017 · https://pubmed.ncbi.nlm.nih.gov/28396101/