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SEXUALLY ENHANCING SUBSTANCES Testosterone boosters

Testosterone-booster dietary supplement products claim to increase the male sex hormone testosterone, which in turn can affect muscle strength, endurance, and male sexual performance. Testosterone boosters available in the dietary supplement marketplace are often advertised as a "natural way" to increase testosterone levels in the body.

Other testosterone products are available online as so-called "prescriptions," patches, and sprays. In addition, a medical provider can prescribe "testosterone replacement therapy" for those with specific medical conditions.

The benefit and safety of dietary supplement products promoted to boost testosterone—at any age—have not been established, and some products could be dangerous and illegal.

Testosterone is a hormone that serves many roles, including sex drive, development of muscle strength and mass, sperm production, bone growth, and fat distribution. As men and women age, their testosterone levels gradually decrease over time. For men, levels decrease approximately 1% a year, typically beginning between the ages of 30 and 40. Some signs of low testosterone include low sex drive, fatigue, decreased muscle mass, and hair loss. Some of these signs, however, also might have nothing to do with testosterone and could reflect other health issues. The only way to know if your testosterone level is low is through consultation with a medical provider, who will do blood tests. Sometimes low testosterone is a secondary effect of other medical conditions, so a thorough evaluation by a medical provider is important.

Testosterone-booster dietary supplements

Common claims you might come across with dietary supplement testosterone boosters are "promotes testosterone," "increases drive," "supports healthy libido," "boosts sex drive," and "enhances performance." These supplements often consist of combinations of ingredients, including "<u>proprietary blends</u>." Some common ingredients you might see on labels include B vitamins, vitamin D, minerals (such as zinc, calcium, and magnesium), <u>DHEA</u> (and its metabolites and derivatives), and botanicals such as <u>Tribulus</u> <u>terrestris</u>, ashwagandha, fenugreek, longjack root extract, horny goat weed, saw palmetto, <u>Eurycoma longifolia</u>, and ginseng. There is no evidence that any combination of these or other ingredients in dietary supplements is effective for any claimed benefit you might see advertised to increase testosterone levels.

A few ingredients that appear on some product labels are actually **prohibited for use in dietary supplements**, such as <u>BMPEA</u>, isopropyInorsynephrine, and <u>phenibut</u>. Others appear to be plant-based steroids (such as diosgenin), but it is hard to tell whether they are "natural" (taken from a plant source) or synthetic (made in a lab).

Some testosterone-booster dietary supplements are also known to be "tainted"—that is, to contain drugs or other prohibited ingredients not disclosed on the label. FDA's list of <u>Tainted Products Marketed as Dietary Supplements</u> shows that common hidden ingredients in products marketed for sexual enhancement include the prescription drugs sibutramine, tadalafil, and sildenafil, among others. <u>FDA warns</u>, "Consumers may unknowingly take products laced with varying quantities of approved prescription drug ingredients, controlled substances, and untested and unstudied pharmaceutically active ingredients." These products could harm you.

Prescription testosterone medications

Testosterone is available as a prescription medication, but it should only be used under the supervision of a healthcare provider. Clinical practice guidelines for prescribing such medications are available through the <u>Endocrine Society</u>.

What about other "prescriptions" online?

Many online prescriptions are available that claim to be "FDA approved," but the purchaser isn't required to provide laboratory test results or confirmation of a clinical diagnosis in order to obtain the product. You should avoid using any such products.

Bottom line

If you are concerned about your testosterone level, talk with a healthcare provider to have your levels confirmed through laboratory testing. Service Members should inform their military healthcare provider about any prescription medications that weren't received from a Military Treatment Facility.

The benefits and safety of these products—dietary supplements and medications—have not been established for otherwise healthy individuals wishing to boost their testosterone levels.

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