

Testosterone Support Complex



CLINICAL APPLICATIONS

- Supports Healthy Testosterone Levels and Free Testosterone Availability
- Promotes Vitality, Energy and Physical Performance
- Helps Maintain Normal Stress Hormone Balance
- Supports Reproductive Health, Libido and Sperm Parameters
- Maintains Balanced Testosterone Metabolism

ENDOCRINE HEALTH

Testosterone Support Complex is a clinician-designed male hormone support formula that targets the multifactorial physiology of testosterone regulation, including stress signaling, hypothalamic–pituitary–gonadal (HPG) axis function, enzymatic testosterone synthesis, and free hormone availability. Testosterone Support Complex integrates clinically studied botanicals—Tongkat Ali, ashwagandha, and fenugreek—with bioavailable minerals such as boron and zinc to address both upstream and downstream drivers of testosterone balance. Working synergistically, these ingredients support endogenous testosterone production, reduce stress-related suppression of the HPG axis, and help maintain a favorable androgen environment associated with male vitality, physical performance and reproductive health.

Overview

Healthy testosterone levels are vital for male energy, physical performance, cognitive function, mood and overall wellbeing. Epidemiological studies suggest that approximately 20–25% of adult men have total testosterone levels below commonly used clinical thresholds, with prevalence increasing substantially with age and metabolic dysfunction.¹ Longitudinal studies further demonstrate that testosterone levels decline gradually across adulthood—by an average of around 1% per year beginning in the third to fourth decade of life. Importantly, this decline is not driven by aging alone, but is strongly influenced by modifiable factors such as chronic stress, excess adiposity, insulin resistance, micronutrient insufficiencies and environmental exposures. Even modest disruptions in testosterone production, free testosterone availability, or stress physiology can meaningfully impact strength, motivation, libido, cognitive performance and overall vitality.²

Stress physiology plays a central role in this process. Chronic elevations in cortisol suppress HPG-axis signaling by inhibiting gonadotropin-releasing hormone (GnRH) and luteinizing hormone (LH), impair Leydig cell function, and ultimately reduce testosterone synthesis. At the same time, micronutrient insufficiencies and unfavorable hormone metabolism may further limit free testosterone availability.

Testosterone Support Complex was formulated to address these interconnected drivers of hormonal decline through targeted, evidence-based support, helping clinicians intervene upstream in the multifactorial physiology that governs testosterone regulation.

Tongkat Ali (LJ100®)[†]

Tongkat Ali (*Eurycoma longifolia*) is a traditional botanical recognized for its influence on male vitality and stress balance. LJ100® is a patented, standardized extract containing clinically relevant concentrations of eurypeptides and glycosaponins. Research suggests that Tongkat Ali may help support testosterone production by influencing multiple physiological pathways. It has been studied for its ability to support normal cortisol levels, which is significant because elevated stress hormones can inhibit testosterone synthesis through HPG-axis suppression. By supporting healthy cortisol metabolism, Tongkat Ali may indirectly help maintain testosterone production during times of stress.³

Human clinical trials have shown that 200 mg per day of Tongkat Ali supported a 37% increase in testosterone in men with low baseline levels over four weeks. Other research demonstrates improvements in libido, erectile function, and subjective energy, as well as reductions in tension, anger, and cortisol-

[†] These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.

related symptoms.³⁻⁵ In a randomized, placebo-controlled trial in young healthy males, supplementation with LJ100® was also associated with favorable shifts in the testosterone-to-cortisol ratio and improvements in strength and body composition parameters, suggesting benefits even in men without clinically low testosterone.⁶ In addition, animal studies suggest that Tongkat Ali may support healthy LH activity, providing upstream signaling for endogenous testosterone synthesis.⁷ Together, these findings indicate that Tongkat Ali supports male endocrine health both through hormonal and stress-modulating pathways.

Ashwagandha (*Withania somnifera*)†

Ashwagandha is a well-characterized adaptogenic botanical with substantial human clinical data supporting its effects on stress physiology, endocrine balance and male reproductive health. Its influence on testosterone appears to be mediated primarily through cortisol reduction, improved HPG-axis signaling, and testicular function support, rather than direct androgenic activity.

In a randomized, double-blind, placebo-controlled clinical trial in adult males, supplementation with 300 mg of standardized ashwagandha root extract twice daily for eight weeks resulted in a significant increase in serum testosterone, along with improvements in sexual well-being and reductions in stress markers.⁸ In another randomized placebo-controlled study of stressed and overweight adults, ashwagandha supplementation was associated with significant reductions in cortisol and improvements in overall hormone balance. In male participants, testosterone levels increased relative to placebo, supporting the concept that stress modulation may positively influence androgen status.⁹ Additional studies in men undergoing resistance training have shown that ashwagandha supplementation supports greater increases in testosterone, muscle strength, and lean mass, suggesting improved anabolic signaling and recovery.¹⁰

Fenugreek (*Trigonella foenum-graecum*)†

Fenugreek seed extract has been studied for its role in supporting male reproductive health, libido, body composition and testosterone availability. Unlike direct testosterone stimulants, fenugreek appears to influence androgen metabolism and utilization, helping preserve endogenous testosterone activity.

In a randomized, placebo-controlled clinical trial in healthy men, supplementation with a standardized fenugreek extract resulted in improvements in serum testosterone levels, libido, and sexual function, along with favorable changes in strength and body composition.¹¹ In a comprehensive review of the mechanistic and clinical literature, fenugreek was shown to support testosterone balance through multiple physiological pathways. Proposed mechanisms include modulation of key enzymes involved in testosterone metabolism, including aromatase, which converts

testosterone to estradiol, and 5 α -reductase, which converts testosterone to dihydrotestosterone. Additional effects include improvements in insulin sensitivity and potential enhancement of androgen receptor activity, collectively supporting a favorable androgenic environment.¹²

Preclinical data suggest that certain fenugreek saponins and glycosides may help reduce conversion of testosterone into downstream metabolites, thereby supporting testosterone availability.¹³ Fenugreek is described as a potential aromatase modulator, reflecting its broader, indirect effects on hormone balance. Its multifactorial metabolic and enzymatic activity may help support a favorable androgen environment, particularly in men experiencing metabolic stress or age-related hormonal shifts.

Zinc (as Zinc Bisglycinate Chelate)†

Zinc plays an essential role in male reproductive and endocrine physiology. It functions as a structural and catalytic cofactor for numerous enzymes, including those involved in testosterone biosynthesis such as 17 β -hydroxysteroid dehydrogenase. Adequate zinc status supports healthy testicular function and helps protect Leydig cells from oxidative stress, which can impair steroidogenesis. Zinc has also been shown to support balanced aromatase activity, helping maintain optimal testosterone-to-estrogen ratios in men.

While zinc supplementation most significantly influences individuals with poor zinc status, even marginal insufficiency can impact testosterone metabolism. Research demonstrates that supplementation can restore normal testosterone levels in men with dietary zinc deficiency, and studies in athletes indicate that zinc combined with magnesium can support healthy testosterone levels and muscle performance.^{14,15} Testosterone Support Complex includes zinc in a fully reacted bisglycinate chelate form to support optimal absorption and gastrointestinal tolerance.

Boron (as Bororganic Glycine)†

Boron is a trace mineral that supports steroid hormone metabolism, bone health, cognitive function and inflammatory balance. Emerging evidence suggests that boron may influence the metabolism of free testosterone by modulating sex hormone-binding globulin, vitamin D utilization, and enzymatic pathways involved in steroid hormone processing. In healthy men, supplemental boron intake at levels around 6 mg per day has been shown in clinical research to support healthy free testosterone levels, favorably influence testosterone-to-estrogen balance, and help maintain normal inflammatory markers.¹⁶

Beyond endocrine support, boron influences mineral and vitamin metabolism, particularly as it relates to bone health and joint comfort, both relevant to male vitality and physical performance. By supporting these interconnected pathways, boron helps maintain hormonal equilibrium and physiological resilience.

† These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.

Directions

2-4 capsules per day or as recommended by your health care professional.

Does Not Contain

Gluten, yeast, artificial colors, or flavors.

Cautions

Do not consume this product if you are pregnant or nursing. Consult your physician for further information.

Supplement Facts ^{V1}		
Serving Size 4 Capsules Servings Per Container 30		
	Amount Per Serving	% Daily Value
Zinc (as Zinc Bisglycinate Chelate) (Albion®)	10 mg	91%
Ashwagandha Root Extract (Standardized to contain 1.5% Withanolides)	600 mg	*
Fenugreek (<i>Trigonella foenum-graecum</i>) Seed Extract	500 mg	*
Tongkat Ali (<i>Eurycoma longifolia</i>) Root Extract (LJ100®)	400 mg	*
Boron (as Bororganic Glycine) (Albion®)	6 mg	*

* Daily Value not established.

Other Ingredients: Microcrystalline Cellulose, Hypromellose (Natural Vegetable Capsules), Magnesium Stearate and Silicon Dioxide.

ID# 724120 120 Capsules

References

1. Araujo AB, Esche GR, Kupelian V, et al. Prevalence of symptomatic androgen deficiency in men. *J Clin Endocrinol Metab* 2007;92(11):4241-4247.
2. Institute of Medicine (US) Committee on Assessing the Need for Clinical Trials of Testosterone Replacement Therapy; Liverman CT, Blazer DG, eds. Testosterone and Aging: Clinical Research Directions. Washington (DC): National Academies Press (US); 2004. 2, Testosterone and Health Outcomes. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK216175/?utm>
3. Talbott SM, Talbott JA, George A, Pugh M. Effect of Tongkat Ali on stress hormones and psychological mood state in moderately stressed subjects. *J Int Soc Sports Nutr* 2013;10(1):28.
4. Leisegang K, Finelli R, Sikka SC, Panner Selvam MK. *Eurycoma longifolia* (Jack) Improves Serum Total Testosterone in Men: A Systematic Review and Meta-Analysis of Clinical Trials. *Medicina (Kaunas)* 2022;58(8):1047.
5. Tambi MI, Imran MK, Henkel RR. Standardised water-soluble extract of *Eurycoma longifolia*, Tongkat ali, as testosterone booster for managing men with late-onset hypogonadism? *Andrologia* 2012;44 Suppl 1:226-230.
6. Chan KQ, Stewart C, Chester N, Hamzah SH, Yusof A. The effect of *Eurycoma Longifolia* on the regulation of reproductive hormones in young males. *Andrologia* 2021;53(4):e14001.
7. Low BS, Das PK, Chan KL. Standardized quassinoid-rich *Eurycoma longifolia* extract improved spermatogenesis and fertility in male rats via the hypothalamic-pituitary-gonadal axis. *J Ethnopharmacol* 2013;145(3):706-714.
8. Chauhan S, Srivastava MK, Pathak AK. Effect of standardized root extract of ashwagandha (*Withania somnifera*) on well-being and sexual performance in adult males: A randomized controlled trial. *Health Sci Rep* 2022;5(4):e741.
9. Lopresti AL, Drummond PD, Smith SJ. A Randomized, Double-Blind, Placebo-Controlled, Crossover Study Examining the Hormonal and Vitality Effects of Ashwagandha (*Withania somnifera*) in Aging, Overweight Males. *Am J Mens Health* 2019;13(2):1557988319835985.
10. Wankhede S, Langade D, Joshi K, Sinha SR, Bhattacharyya S. Examining the effect of *Withania somnifera* supplementation on muscle strength and recovery: a randomized controlled trial. *J Int Soc Sports Nutr* 2015;12:43.

† These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.

EFFICACY
the power of *e*

11. Rao A, Steels E, Inder WJ, Abraham S, Vitetta L. Testofen, A specialised *Trigonella foenum-graecum* seed extract reduces age-related symptoms of androgen decrease, increases testosterone levels and improves sexual function in healthy aging males in a double-blind randomised clinical study. *Aging Male* 2016;19(2):134-142.
12. Albaker WI. Fenugreek and Its Effects on Muscle Performance: A Systematic Review. *J Pers Med* 2023;13(3):427.
13. Aswar UM, Nimse SR, Thakurdesai PA. Androgenic Efficacy and Mechanism of Glycosides-Based Standardized Fenugreek Seed Extract Through Aromatase And 5-Alpha Reductase Inhibition. *Phcog J* 2024;16(1):9-19.
14. Prasad AS, Mantzoros CS, Beck FW, Hess JW, Brewer GJ. Zinc status and serum testosterone levels of healthy adults. *Nutrition* 1996;12(5):344-348.
15. Brilla LR, Conte V. Effects of a novel zinc-magnesium formulation on hormones and strength. *J Exerc Physiol Online* 2000;3:26–36.
16. Naghii MR, Mofid M, Asgari AR, Hedayati M, Daneshpour MS. Comparative effects of daily and weekly boron supplementation on plasma steroid hormones and proinflammatory cytokines. *J Trace Elem Med Biol* 2011;25(1):54-58.