

Tongkat Ali

Eurycoma longifolia Jack — also sold as longjack, Malaysian ginseng, pasak bumi

Tongkat Ali is the most commercially aggressive entrant in the "natural testosterone" category, and its evidence base does not match the volume of its marketing. A specific standardized water extract has modest, mostly manufacturer-funded support in men who are already low in testosterone; quality control across the retail category is poor; and most buyers will not be in the population that responded in the trials.

SUMMARY TABLE

Attribute	Summary
Primary uses	Raising total testosterone in men with low baseline levels; reducing perceived stress and improving mood; supporting erectile function, libido and sperm quality.
Evidence strength	Weak to moderate, and materially compromised. A 2022 meta-analysis found significant testosterone increases only in men starting below ~300 ng/dL. Most positive trials are small, short and manufacturer-funded.
Effective dose	200–400 mg/day of standardized water extract (e.g., Physta, LJ100) is the range used in most positive trials. Split into two doses if ≥400 mg to reduce restlessness and GI upset.
How to take	Capsules with water, morning or morning-plus-early-afternoon. Avoid dosing within 6 hours of bedtime — late dosing is a common cause of reported insomnia.
Time to effect	Mood/fatigue measures shifted within 2–4 weeks; testosterone changes measurable at 4 weeks, clearest at 12 weeks.
Serious risks	Documented lead contamination in some Malaysian retail products (one analysis: 10.64 ppm). Appears in adverse-event databases associated with liver injury, though causation is unclear given common adulteration and polyherbal formulation.
Who should avoid it	Prostate, breast or other hormone-sensitive cancer; liver or kidney disease; testosterone replacement therapy; pregnancy/breastfeeding; children; sleep-onset insomnia.
Quality markers	Stated eurycomanone percentage; a named clinical extract (Physta, LJ100); third-party certificate of analysis covering heavy metals, especially lead; NSF or USP certification.

WHAT THE HUMAN TRIALS ACTUALLY SHOW

A 2022 meta-analysis concluded *Eurycoma longifolia* significantly increased serum total testosterone — but the effect concentrated in men whose baseline was already below ~300 ng/dL, a materially different claim from what most retail packaging implies. The best-designed individual trial (105 men, 50–70 years, Food & Nutrition Research) found total testosterone rose significantly at 100 mg and 200 mg doses over 12 weeks, with Aging Male Symptoms and Fatigue Severity scores improving significantly and no clinically relevant safety changes — but the tested extract is proprietary and much of the positive literature is manufacturer-funded, with independent replication thin and little substantial new RCT data since 2022.

SAFETY, CONTAMINATION, AND RUNNING A SENSIBLE TRIAL

The more serious concerns involve the supply chain rather than the plant itself: professional monographs document a Malaysian retail product containing lead at 10.64 ppm, and unregulated "tongkat ali 1,000 mg" labels convey almost no information about actual eurycomanone content. Because response depends heavily on baseline hormonal status, a morning total and free testosterone panel before starting — repeated at 12 weeks on the same protocol — is the only way to know whether this supplement is doing anything for a given individual.

BOTTOM LINE

Tongkat Ali is a reasonable candidate for a specific person: a man over about 45 with laboratory-confirmed low testosterone and fatigue or low mood, willing to buy a named clinical extract with a published certificate of analysis and retest bloodwork at 12

weeks. For a man with normal testosterone hoping for a physique effect, the expected benefit is close to zero. For anyone with a hormone-sensitive cancer or liver disease, this is a supplement to discuss with a physician before purchase.

SOURCES

1. Leisegang K, et al. "Eurycoma longifolia Improves Serum Total Testosterone in Men: Meta-Analysis." *Medicina*, 2022.
2. "Effect of Eurycoma longifolia (Physta) on testosterone and quality of life in ageing men." *Food & Nutr. Res.*, 2021.
3. Examine.com. "Tongkat Ali: benefits, dosage, and side effects." Reviewed 2025.
4. Drugs.com Professional Monograph. "Eurycoma Longifolia." Reviewed 2025.
5. European Food Safety Authority. "Safety of Eurycoma longifolia root extract as a novel food."

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