

Shilajit

Asphaltum punjabinum / mumijo — Himalayan rock exudate, sold as purified resin, powder and standardized extract

Shilajit has the widest gap in this series between what is claimed and what has been tested. Its entire positive human evidence base is a handful of small, mostly single-site trials, several uncontrolled. Meanwhile the contamination literature is active and specific — including a 2025 finding that thallium levels in some finished supplements exceeded those in the raw source material.

SUMMARY TABLE

Attribute	Summary
Primary uses	Marketed for testosterone, energy, mitochondrial function, altitude adaptation, fertility and bone density. Claims with any human trial support (each resting on a single small study): testosterone, strength retention, fertility, bone density.
Evidence strength	Weak throughout; no meta-analysis of shilajit RCTs exists and nothing has been independently replicated. Mitochondrial/CoQ10 and altitude-sickness claims have no human trial support at all.
Effective dose	250–500 mg/day of purified standardized extract, in two divided doses with meals. The testosterone trial used 250 mg twice daily for 90 days; the strength trial found 500 mg/day effective where 250 mg was not.
How to take	Capsules with water, split doses with meals. Insist on fulvic acid quantified by ISO 19822:2018 — colorimetric methods overstate content.
Time to effect	No acute effect supported; positive trials ran 8 weeks to 90 days (bone trial: 48 weeks). Expect no reliable change before 4–8 weeks.
Serious risks	Contamination, not pharmacology. A 2025 BMC Chemistry analysis found thallium up to 0.5 µg/g in commercial supplements — higher than in the crude source, indicating processing-introduced contamination. A benchmark JAMA study of 193 Ayurvedic products found 20.7% contained detectable lead, mercury or arsenic.
Who should avoid it	Pregnancy/lactation; children; hemochromatosis or iron overload; chronic kidney disease; hormone-sensitive cancers; drug-tested athletes using non-certified product.
Quality markers	Batch-specific certificate of analysis with heavy metals by ICP-MS (ask specifically about thallium); fulvic acid by ISO 19822:2018; FTIR authenticity screening; disclosed geographic origin.

THE EVIDENCE, TRIAL BY TRIAL

The testosterone claim traces to a single 90-day RCT (75 completers) reporting a 20.45% total testosterone rise — but the placebo arm fell 24% over the same period, a biologically odd result that means the between-group difference is driven as much by placebo decline as by treatment rise; the study has never been independently replicated. The strength evidence (2019, 63 men) rests on a post-hoc subgroup of 30; the lower-performing half showed no benefit. The fertility finding (a 61.4% sperm-count increase) comes from an uncontrolled 28-person study. There is no meta-analysis because there is not enough to pool.

CONTAMINATION IS THE REAL STORY

A January 2025 BMC Chemistry paper found thallium in commercial supplements reaching 0.5 µg/g — exceeding levels in the crude source material, meaning "purified" does not reliably mean cleaner. The benchmark JAMA Ayurvedic-products study found 75% of contaminated products claimed Good Manufacturing Practices, which conferred no measurable protection. A more reassuring 2024 ConsumerLab test of eight commercial products found heavy metals below concern levels, but also found fulvic acid content varying roughly 320-fold across brands, with most not disclosing it on the label at all.

BOTTOM LINE

Shilajit's marketing has outrun its evidence by a wide margin — one unreplicated testosterone trial with a peculiar placebo arm, one strength trial living in a post-hoc subgroup, and no meta-analysis. If trying it, use the trialed protocol (250 mg twice daily with meals for 90 days of a purified extract standardized to ~50% fulvic acid), buy only a product with a batch-specific heavy-metal certificate naming thallium, and skip it entirely if pregnant, iron-overloaded, or living with kidney disease.

SOURCES

1. Pandit S, et al. "Clinical evaluation of purified Shilajit on testosterone levels." *Andrologia*, 2016.
2. Keller JL, et al. "Shilajit supplementation on fatigue-induced strength decline." *JISSN*, 2019;16:3.
3. "Thallium content of shilajit and shilajit-containing supplements." *BMC Chemistry*, 2025;19:20.
4. Saper RB, et al. "Lead, Mercury, and Arsenic in Ayurvedic Medicines Sold via the Internet." *JAMA*, 2008.
5. ConsumerLab. "Shilajit Supplements Found to Contain Widely Varying Amounts of Fulvic Acid." 2024.

DISCLAIMER, FDA NOTICE & COPYRIGHT — Prepared September 6, 2026

This report is for educational and informational purposes only and does not constitute medical, nutritional, or other professional advice. No reader relationship, including a doctor-patient relationship, is created by your use of this content.

FDA Disclosure: These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.

The benefits described are based on published clinical research using specific standardized extracts at clinical doses. Results with other formulations, brands, or dosages may differ, and individual results may vary. The publisher has not independently verified manufacturer claims for any commercial product and is not a licensed healthcare provider, dietitian, or pharmacist.

Supplements may interact with certain medications and may not be appropriate for everyone. The interaction and contraindication information referenced in this report is not exhaustive. Always consult a qualified healthcare professional — and get a full medication review from your physician or pharmacist — before starting any new supplement, especially if you are pregnant, breastfeeding, have a pre-existing medical condition, or are taking prescription medications.

This report reflects research available as of its publication date and may not incorporate more recent findings; the publisher has no obligation to update it. It addresses ingredients as regulated under U.S. law and may not reflect requirements in other jurisdictions. Some ingredients discussed may be subject to additional state-specific warnings (for example, California's Proposition 65) not reproduced here.

Use of the information in this report is at your own risk. To the fullest extent permitted by law, the publisher disclaims all liability for any loss, injury, or damage arising from your use of, or reliance on, this content.

Copyright 2026 Tabby Cat Enterprises, LLC. All rights reserved. Distributed for Consumer Educational Purposes Only.