

Ashwagandha: Roots vs. Leaves

Choose roots, not leaves, for efficacy and safety

Ashwagandha sales grew from **\$7.5 million** in 2018 to **\$335 million** in 2023,¹ landing this therapeutic herb in the top 5 of American Botanical Council's top 40 list of mainstream ingredients.



But with growth can come challenges. Now, understanding the critical importance of using products derived from **Ashwagandha roots**, not leaves, is more significant than ever.

What is Ashwagandha?

Ashwagandha (*Withania somnifera*) offers 20+ therapeutic benefits for psychological and physiological wellness.



Key benefits driving popularity



Reduced stress and stress-related food cravings



Enhanced sleep quality



Enhanced memory and cognitive function



Improved endurance, strength and immune function



Improved sexual function in both men and women, and testosterone in men

Traditional wisdom: Roots vs. leaves

For thousands of years, Ayurvedic medicine has designated roots strictly for internal consumption, while reserving leaves only for external applications. Root-only ashwagandha is critical to supplement integrity.



✓ Root use:

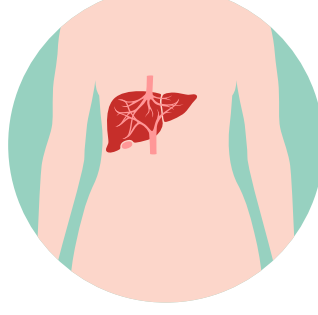
Ayurvedic history and the majority of independent modern science has focused on ashwagandha's root form and its systemic benefits, designating the roots safe for internal consumption.²

✗ Leaf use:

Ayurvedic medicine has always designated leaves only for use in external applications such as topical treatments for burns and skin conditions.

Caution! Leaf compounds may be toxic

While roots are clinically validated, leaves contain higher concentrations of potentially toxic compounds (Withaferin A and Withanone).³

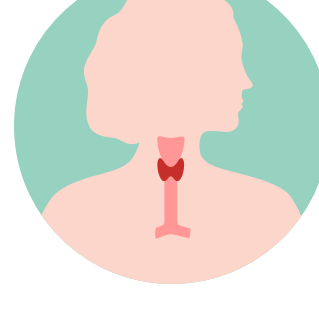


Liver toxicity

- Recent reports of liver toxicity are linked to products containing leaf material
- Elevated compound levels may explain hepatotoxicity, especially when consumed long term⁴

Thyroid & hormonal toxicity

- Toxicological reports from products containing leaves might lead to potential endocrine disruption⁵
- Leaf extracts may affect thyroid and sex hormones



Modern Science

Independent research (such as that done by universities) and modern clinical studies have only focused on root usage. Without rigorous, long-term human studies on leaf-based extracts, any claim to their safety is premature.



Root studies

Multiple clinical trials, extensively documented in PubMed

Leaf studies

Rare, scattered, primarily preclinical or done by manufacturers

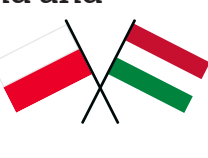


Government of India

Regulatory Landscape

Worldwide, regulations are shifting toward stricter controls, with India issuing formal advisories against internal use of ashwagandha leaf.

A few European countries, such as Poland and Hungary, are restricting ashwagandha supplements to root-only formulations.



Global Pharmacopeial Standards

Scientific reference works from around the world refer to only the root, these works include:

- United States, British, Indian and Ayurvedic Pharmacopoeias
- W.H.O. monograph

Industry Impact

Economic incentives drive manufacturers to substitute expensive roots with cheaper leaf material, raising adulteration concerns.⁶



Leaves

100x less expensive

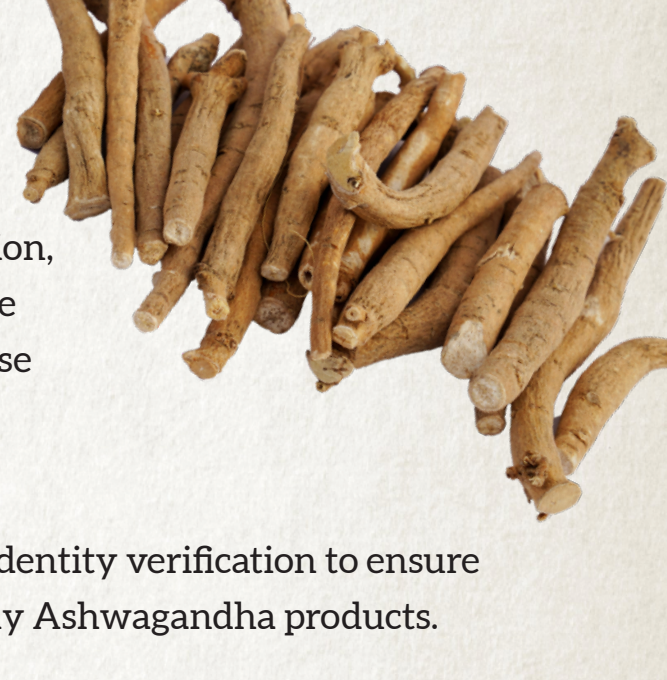


Roots

authentic material

Watch for Adulteration

With growth has come increased rates of adulteration, raising concerns about product authenticity and the potential for liver toxicity. Consumers should choose ashwagandha with third-party testing, root-only certification and transparent sourcing.



Every batch of raw material should undergo strict identity verification to ensure that consumers receive safe, authentic and root-only Ashwagandha products.

Gold Standard KSM-66 Ashwagandha

- Certified organic full-spectrum extract composed solely of root
- Involved in 50+ "Gold Standard" clinical studies
- Holds 46+ certifications meeting global standards

Consumers deserve transparency—products that deliver both safety and proven efficacy.

References

- Nutrition Business Journal
- "Comparative Pharmacognostic Study of Different Parts of Withania somnifera and its Substitute Ruellia tuberosa," 2015; <https://pubs.sciepub.com/wjar/3/1/7/>
- "Distribution Of Withaferin A, an Anticancer Potential Agent, In Different Parts of Two Varieties of Withania somnifera (L.) Dunal. Grown in Sri Lanka," 2013
- "DNA damage by Withanone as a potential cause of liver toxicity observed for herbal products of Withania somnifera," 2021; <https://www.sciencedirect.com/science/article/pii/S2666027X21000074>
- <https://www.nccih.nih.gov/health/ashwagandha>
- "Authentication of the market samples of Ashwagandha by DNA barcoding reveals that powders are significantly more adulterated than roots," 2020; <https://www.sciencedirect.com/science/article/abs/pii/S0378874119338760>