ToxTidbits

Maryland Poison Center
UNIVERSITY OF MARYLAND SCHOOL OF PHARMACY

May 2026 | Poison Center Hotline: 1-800-222-1222

The Maryland Poison Center's Monthly Update: News, Advances, Information

Ashwagandha

Have you heard of Ashwagandha (*Withania somnifera*)? It is a plant-derived supplement increasingly used for stress, anxiety, and cognitive support. Despite a long history of use in Ayurveda, a traditional system of medicine practiced in India, use in modern populations raises concerns regarding safety, toxicity, and lack of regulatory oversight.[1]

The pharmacologic mechanisms of ashwagandha are not fully elucidated. Proposed active constituents include withanolides, which are steroidal lactones with anti-inflammatory, antioxidant, and potential neuroactive properties. A randomized controlled trial with a large sample size (n=1002) across 15 sites in different countries suggests favorable tolerability with no significant difference between the placebo and treatment groups (p=0.487) on a 7-point Likert scale of Global Assessment of Tolerability to Therapy.[2] Safety outcomes were measured by hematological data, liver function tests, and renal functions at baseline and week 8 visits, with no significant differences. The study noted no serious adverse events, other than mild effects such as nausea, dry mouth, and headaches.[2] This study is limited by the short duration of use (8 weeks), standardized formulation, and enrollment of healthy individuals. These conditions do not reflect real-world use, where patients often have comorbidities treated with medications and no restriction on the duration of use for ashwagandha.

While a non-blinded, randomized study of 80 participants treated with either sertraline or sertraline with ashwagandha for 3 months showed no impact on liver function for the combined use of antidepressant and ashwagandha, a retrospective chart review study suggested high rates of interactions with SSRIs when concomitantly used.[3,4] There were 30 reports used to identify a causal relationship to induce varying side effects such as GI symptoms, myalgia, and bleeding.[4] The adverse events suggested a possible interaction mechanism that lies in the CYP3A4 and CYP2D6 inhibition by ashwagandha.[4] With many drugs' metabolism pathways being mediated through these major CYP enzymes, this poses increased awareness for healthcare providers to engage patients in counseling for possible interactions with their concurrent medications.

At higher dosages and with chronic use, the risk for toxicity increases in multiple perspectives. Withanolides create reactive metabolites that induce oxidative stress, leading to liver damage and dysfunction.[5] The partake in regulating the hypothalamic-pituitary-adrenal (HPA) axis influences cortisol secretion and response to stress.5 An overstimulated HPA axis can lead to hormonal imbalance and increased thyroid hormone activity.

Despite promising therapeutic claims, ashwagandha remains an unregulated supplement with emerging safety concerns.[6] Clinicians should maintain a high index of suspicion for supplement-related toxicity and routinely assess herbal product use in patients presenting with unexplained hepatic, endocrine, or neurologic findings.

For more information on ashwagandha or suspect an exposure to ashwagandha, call your local poison center at 1-800-222-1222.

Did you know?

"Ashwagandha" comes from the ancient language of Sanskrit and means "smell of a horse."

The plant's roots are said to smell like a wet horse, and traditionally it was believed to give you the strength, stamina, and vitality of a horse.

References:

1. Singh N, Bhalla M, de Jager P, Gilca M. An overview on ashwagandha: a Rasayana (rejuvenator) of Ayurveda. Afr J Tradit Complement Altern Med. 2011;8(5 Suppl):208-213. Doi:10.4314/ajtcam.v8i5S.9
2. Pakhale, K., J.Salve, J.Ademola, J.Parraca, and D.Langade. 2026. "Safety of 8-Week Administration With Ashwagandha (Withania somnifera) Root Extract in Adults With Stress and Anxiety: Findings From a Prospective, Randomized, Multi-Center, Double-Blinded, Placebo-Controlled Study." Phytotherapy Research1–11. https://doi.org/10.1002/ptr.70315.
3. Căuș MN, Lupoae M, Chițescu CL. Efficacy and Safety of Herbal Supplements with Anxiolytic, Antidepressant, and Sedative Action: A Review of Clinical Data and Toxicological Risks. Pharmaceuticals (Basel). 2026;19(3):399. Published 2026 Feb 28. Doi:10.3390/ph19030399
4. Siwek M, Woroń J, Wrzosek A, Gupało J and Chrobak AA (2023) Harder, better, faster, stronger? Retrospective chart review of adverse events of interactions between adaptogens and antidepressant drugs. Front. Pharmacol. 14:1271776. doi: 10.3389/fphar.2023.1271776
5. Kumar, A., B. K.Sah, F.Ahmad, V.Jamwal, and S. K.Sahu. 2026. "Potential Adverse Effects of Ashwagandha: A Critical Review of Preclinical and Clinical Evidence." Phytotherapy Research1–19. https://doi.org/10.1002/ptr.70158.
6. Hingorani L, Saste G, Nandikar M, Mulay V, Cropper S, Gafner S. Ashwagandha (Withania somnifera) root laboratory guidance document. Austin, TX: ABC-AHP-NCNPR Botanical Adulterants Prevention Program; October 2025.

Min Song, PharmD Candidate 2026

@MPCToxTidbits