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FILE: · **Ashwagandha (*Withania somnifera*)**
· **Adaptogens**
· **Ayurvedic Herbs**

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RE: Ashwagandha Monograph

Anon. Monograph: Withania somnifera, *The European Journal of Herbal Medicine*, 1998, Vol. 4, Issue 2. pp. 17-22.

Ashwagandha (*Withania somnifera*) is an evergreen shrub in the Solanaceae family, growing up to 2 meters in height. It is widely distributed in stony terrain up to an altitude of 1,700m in Mediterranean regions, as well as the Middle East, Africa, India and Pakistan. Its use as an herbal medicine has been widely practiced in Ayuverdic, Unani and Middle Eastern traditional medicines where it is highly regarded as a panacea, aphrodisiac and rejuvenative. The author discusses the potential uses and summarizes current clinical and pharmacognosy research.

The roots of ashwagandha are primarily used in Ayuverdic medicine, although both the leaves and seeds contain medicinal properties. The three main groups of active constituents are steroidal lactones, alkaloids, and flavonoids, in addition to several amino acids and iron. The presence of withanolides and sitonindosides occur rarely in nature and only to the family Solanaceae. Withanolides are found primarily in the leaves, and sitoindosides mainly in the root. The root contains numerous medicinal compounds with actions to include adaptogenic, analgesic, anti-inflammatory, anti-microbial, anti-neoplastic, aphrodisiac, hypnotic and narcotic (i.e. sleep inducing) properties. The leaves also possess analgesic, anti-inflammatory, anti-neoplastic and narcotic actions, while the seeds contain only diuretic, hypnotic and milk coagulant actions.

Ashwagandha root is traditionally used for its adaptogenic actions. Unlike the popular adaptogens Asian ginseng (*Panax ginseng*) and Siberian ginseng (*Eleutherococcus senticosus*), ashwagandha tends to have sedative instead of stimulant effects. Withania alkaloids also may have hypotensive actions, unlike ginseng, and may be indicated for persons with high stress presenting symptoms of hypertension and/or insomnia.

The author briefly cites several clinical human studies that establish, according to the author, adaptogenic, anabolic, aphrodisiac, and anti-inflammatory actions, as well as the ability to improve red blood cell count, hemoglobin, and

hair melanin. A double-blind study in India on children aged 8 to 12, studied the effects of 2g daily for 60 days. Body weight, mean red blood cell hemoglobin and grip strength were improved. Another clinical trial conducted over one year on men in their 50's also showed improved red blood cell count, hemoglobin, hair melanin, and sexual performance. Human studies on osteoarthritis and rheumatoid arthritis using an Ayuverdic formula containing ashwagandha (the author does not indicate the other constituents in the formula) showed analgesic and anti-inflammatory properties. The author does not indicate the plant parts used, the method of administration, nor the number of participants in the above sited studies.

Animal studies indicate adaptogenic, analgesic, anti-inflammatory, antimicrobial and nervine sedative actions. The adaptogenic properties of the root are attributed to sitoindodies, which as isolates are anabolic, antidepressant and immunostimulant. Animal trials on a geriatric formula (contents not listed) that contained ashwagandha indicated immunostimulant actions. A comparative animal trial indicated increased stress endurance and the reduction of stomach lining damage from the root extract. Rat studies demonstrated analgesic actions as well as protection against gastric ulceration. Anti-inflammatory activities of the leaf extracts may be attributed to the action of withanolides on the pituitary-adrenal axis. The leaf extracts are also indicated for anti-microbial activity against Gram-positive bacteria and fungi. The root contains a mild sedative action and may act through GABA receptors as a competitive agent.

Toxicity trials on mice using a whole plant alcohol extract administered orally showed no side effects. Arthritis trials indicated nausea, dermatitis and abdominal pain in some participants. Large doses of ashwagandha are contraindicated during pregnancy due to its actions as an abortifacient; however, Ayuverdic texts recommend small amounts as a restorative tonic during pregnancy. Unfortunately, as with other specific information that is lacking in this review, the distinction between a “small” and “large” dose is not given, although 2-5 g per day of the dried root, or equivalent preparation, is considered a normal dose, according to this monograph. —*Susie Epstein*

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