

# Expert Herbal Reality Resource

## Ashwagandha

### Names

**Botanical Name** *Withania somnifera* (L.) Dunal.

**Family:** *Solanaceae*

**Common names:** Winter cherry, Indian ginseng (Engl), ashwagandha (Sanskrit), asgandh (Hindi)



### Description

*Withania somnifera*, a member of the Solanaceae (nightshade) family, is a small to medium perennial shrub which grows up to 150cm in height. It has hair-like branches with simple, alternate ovate leaves, up to 10cm long. The small, greenish-yellow flowers (approximately 1 cm) are borne together in short axillary clusters. The red fruit (6mm in diameter) is smooth, spherical and enclosed in the inflated and membranous calyx. The root is long and tuberous, with brownish white surface and pure white interior.

### Constituents

- Steroidal compounds, including lactones (withaferin A, sitoindoside IX, X (carbon 27-glycowithanolides)) and acylsteryl glucosides (sitoindosides VII, VIII).
- Alkaloids: tropane-type (tropine, pseudotropine), other alkaloids (including isopelletierine, anaferine).

### Traditional use

Ashwagandha is among the most widespread traditional remedies in the Indian subcontinent and is very widely consumed as a food supplement around the world. In Ayurveda, ashwagandha is described as a *medhya rasayan* or promoter of learning and memory retrieval. It is given with pungent or heating herbs such as ginger and long pepper to increase its tonic effects. The roots are said to have tonic and anti-inflammatory properties, and to provide support in skin and respiratory conditions, to build strength in sick children and in the elderly and particularly to help sleep.

Ashwagandha is used to promote lactation in Ayurvedic medicine and the traditional medicine of South-East Asia.<sup>i</sup> One teaspoon (0.5 g) of ashwagandha powder is recommended twice daily with milk for insufficient lactation in a 1990 WHO manual.<sup>ii</sup>

### Traditional actions

Traditional Ayurvedic characteristics are

- Rasa** (taste) Bitter, astringent, sweet.
- Virya** (action) Heating.
- Vipaka** (post-digestive effect) Sweet.
- Guna** (quality) Light, unctuous.
- Dosha** effect reduces excessive *vata* and *kapha*.
- Dhatu** (tissue) Blood, muscle, fat, bone, nerve, reproductive.
- Srota** (channel) Reproductive, nervous, respiratory.

Its actions are described as

*Vrishya* Increases sexual potency.  
*Balya* Increases strength.  
*Medhya* Promotes the intellect.  
*Ojas vardhanam* Increases *ojas*.  
*Nidrajnana* Promotes sleep.  
*Shukrala* Increases sperm production.  
*Shothahara* Prevents consumption and wasting diseases.  
*Rasayana* Rejuvenative.  
*Vatakaphahara* Reduces kapha and vata.  
*Vedana sthapana* Reduces pain.  
*Shwasa* Benefits breathing.

## What practitioners say

**Stress response:** Ashwagandha is considered a primary herb for supporting 'generalised adaptation syndrome' as described by the stress pioneer Hans Selye. It will improve mental capacity and resilience during the stress and help with the recovery phase afterwards.

**Muscle Tissue:** Ashwagandha both reduces inflammation and strengthens muscle tone. It is traditionally applied to muscle weakness, low body weight, emaciation, anaemia, post-convalescent weakness and athletic exertion, and for slow developing children and the elderly. It is used to support smooth muscle organs as well, as a heart tonic, and uterine tonic.

**Immunity:** Ashwagandha can strengthen a weakened immune system and protect it from becoming depleted from immunosuppressive drugs or lifestyle. It also improves white blood cell counts. Ashwagandha has for long been used for chronic inflammatory and arthritic conditions, and as a support in cancer.



**Reproductive:** Ashwagandha improves sperm motility, sperm count and poor sexual performance in men. For the female reproductive system, ashwagandha is used in menstrual imbalances caused by a deficient condition with an aggravation of *vata* and uterine spasms including dysmenorrhoea, amenorrhoea and weakness.

**Endocrine:** Ashwagandha is used to regulate thyroid activity, helping both hypo- and hyperthyroidism.

## Evidence

There is much pre-clinical literature, and some clinical trials, that reinforce the traditional use and benefits of ashwagandha in anxiety<sup>iii,iv,v</sup> and stress-related symptoms.<sup>vi</sup> One systematic review of these studies concluded that subject to methodological heterogeneity, ashwagandha interventions resulted in significantly greater score improvements than placebo in outcomes on anxiety or stress scales.<sup>vii</sup>

In a placebo-controlled studies alongside SSRI antidepressant medication, ashwagandha demonstrated significant additional anxiety reducing effects,<sup>viii</sup> and in reducing symptom measures obsessive-compulsive disorder.<sup>ix</sup> Anxiety reduction has also been seen in other controlled studies, including in schizophrenic patients<sup>x</sup>

In one randomized, double-blind, placebo-controlled study ashwagandha supplementation was associated with significant reduction in morning cortisol levels as well as anxiety scales. Subject to further research these findings suggested that ashwagandha's stress-relieving effects may occur via its moderating effect on the hypothalamus-pituitary-adrenal axis.<sup>xi</sup>



Other controlled clinical trials have demonstrated the benefits of ashwagandha

- improving memory and cognitive functioning in adults with mild cognitive impairment<sup>xii</sup>
- as an adjuvant in conjunction with anti-TB drugs on symptoms and immunological parameters in patients with pulmonary tuberculosis.<sup>xiii</sup>
- Improving sperm counts, volume and motility in infertile male patients,<sup>xiv</sup> and at levels comparable to standard treatment pentoxifylline<sup>xv</sup>
- normalizing thyroid indices in subclinical hypothyroid patients<sup>xvi</sup>
- managing body weight problems in stressed adults<sup>xvii</sup>
- in two trials demonstrating improved muscle strength and body mass distribution in athletic men<sup>xviii,xix</sup>

## Safety

Reviews of clinical trial and other safety data<sup>xx</sup> conclude that ashwagandha is safe in usual use. High doses have been reported to cause gastrointestinal upset, diarrhoea and vomiting.

## Dosage

3 to 8 g/day of dried root by decoction, or equivalent preparation

## References

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