

## *Withania somnifera*-Characteristics, Uses and Side Effects

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### COMMENTARY

*Withania somnifera* is an annual evergreen shrub belonging to the Solanaceae family plants that grows in India, the Middle East, and parts of Africa. It is commonly called Ashwagandha, which means the smell of the horse. The name Ashwagandha has its significance to have unique smell and strength. Though it is used for medicinal purposes in Ayurveda, there is insufficient scientific evidence that it is safe in use. Unlike other nightshade plants like brinjal, tomato, potato containing solanine chemical compound which are inflammatory. This plant is neuroprotective and anti-inflammatory in nature. It boosts energy and reduces stress and anxiety.

### Characteristics of *Withania somnifera*

- It reaches only 1–2 ft. but in some cases 6 ft.
- It is a perennial plant but can be grown as an annual plant too.
- Plant and fruits resemble Chinese lanterns.
- They are commonly called winter cherries, ghost gooseberries, etc.
- Young roots are straight, unbranched, and conical in shape and of different lengths.
- Root thickness varies according to age.
- Outer surface is yellow and wrinkled longitudinally. Tastes bitter and mucilaginous

### Chemical constituents of *Withania somnifera*

The plant's main constituent is alkaloid withanine and it contains pseudowithanine, somniferine, tropine, and pseudotropine and etc. The leaves contain steroid lactone, known as withanolides.

### Uses of *Withania somnifera*

- *Withania somnifera* may possess anti-inflammatory properties.

- *Withania somnifera* extracts are used in the treatment of cancer.
- Levels of testosterone hormone increase in men with sterility problems.
- Decrease in cortisol levels has been found in many cases.
- Improvements in power output have been noted in trained persons subject to sprint performance.
- *Withania somnifera* mainly helps to reduce the symptoms of stress, fatigue, temporary cognitive impairment, etc.
- There is a decrease in total cholesterol when *Withania somnifera* is ingested.
- A small decrease in blood glucose and blood pressure will be noted.
- *Withania somnifera* is able to increase seminal motility.
- When taken orally, this will decrease the stress related to weight gain, and subsequently, lead to weight loss.
- Every part is used including roots, bark, leaves, fruit, and seed are used to treat various diseases such as nervous disorders, intestinal infections, and leprosy.
- Induction of polyploidy Hori culture

### Side effects of *Withania somnifera*

- Gastrointestinal symptoms like nausea, upset stomach, and diarrhea.
- It may help you sleep better at night; drowsiness can be an unwelcome side effect for some users.

### Who should avoid consumption of *Withania somnifera*

- It is unsafe in pregnancy because it can induce abortions, can cause miscarriage, premature birth, or even uterine contractions.
- It alters thyroid function and increases thyroid hormones,

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which could be dangerous for people with hyperthyroidism.

- People with stomach ulcers should avoid them.
- People with high blood pressure need to avoid using *Withania somnifera*.

*Withania somnifera* in India holds a position of importance similar to ginseng in China. It acts mainly on the reproductive and nervous systems and is used to improve vitality and aid recovery after chronic disease. It is also used to treat nervous exhaustion and insomnia. It can be applied as a poultice to boils, swellings, and other painful parts. *Withania somnifera* is considered an

adaptogen and so is used in a number of diseases. It is considered possibly safe when taken daily for up to 3 months.

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### CONFLICT OF INTEREST

The author has declared that no competing interests exist.