

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

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## Abstract

*Withania somnifera* is an annual evergreen shrub belonging to family *Solanaceae* grows in India, the Middle East, and parts of Africa. Though it is used for medicinal purpose in Ayurveda, there is insufficient scientific evidence that it is safe in use. The herb is neuroprotective and anti-inflammatory in nature. It boosts energy and reduces stress and anxiety

**Keywords:** *Solanaceae* • Anxiety • Ayurveda

## Characteristics of *Withania Somnifera*

It reaches only 1ft-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 ground cherry and Chinese lantern. Young roots are straight, unbranched and conical in shape and of different lengths. Root thickness varies according to age while the outer surface is yellow and wrinkled longitudinally. Tastes bitter and mucilaginous.

## Chemical Constituents of *Withania somnifera*

The plants 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 in the treatment of cancer
- Testosterone seen increasing in infertile men
- The decrease in cortisol has been found in humans
- Improvements in power output have been noted in trained people's subject to a sprint performance
- *Withania somnifera* appears 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 has been noted
- *Withania somnifera* is able to increase seminal motility
- Weight decrease has been seen when *Withania somnifera* is taken
- 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 diarrhoea
- 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 increase thyroid hormones, which could be dangerous for people with hyperthyroidism
- People with stomach ulcers should avoid
- 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 as an adaptogen and so is used in 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.