

## Ashwagandha



Ashwagandha is a plant which has long been used medicinally. It is used in traditional Indian and African medicine as an anti-inflammatory, for fever relief, and against infectious disease. Many believe ashwagandha to be effective in stimulating the immune system. It also appears to inhibit swelling and aid memory and can act as a general health tonic.

Ashwagandha contains flavonoids and many active ingredients of the withanolide class. Several studies over the past few years have indicated that ashwagandha has anti-inflammatory, anti-tumor, anti-stress, antioxidant, mind-boosting, and rejuvenating properties. Ashwagandha is commonly found in ayurvedic herbal formulas.

The active constituents in ashwagandha include withanolides which are believed by many experts to account for the many medicinal applications of ashwagandha. Withanolides are steroidal and are similar to the active constituents of Asian ginseng (*Panax ginseng*) known as ginsenosides.

### Ashwagandha as An Antioxidant

Researchers from Banaras Hindu University in Varanasi, India have asserted that some of the chemicals within ashwagandha are powerful antioxidants. They tested these compounds for their effects on rat brains and found an increase in the levels of three natural antioxidants- superoxide dismutase, catalase, and glutathione peroxidase. They say, "These findings are consistent with the therapeutic use of *W. somnifera* [ashwagandha] as an Ayurvedic rasayana (health promoter). The antioxidant effect of active principles of *W. somnifera* may explain, at least in part, the reported anti-stress, cognition-facilitating, anti-inflammatory, and anti-aging effects produced in experimental animal and in clinical situations."

A study done in 1991 at the Department of Pharmacology, University of Texas Health Science Center indicated that extracts of ashwagandha had [GABA](#)-like activity. This may account for this herb's anti-anxiety effects.

### Brain Support Theory

Ashwagandha is used in India to treat mental deficits in geriatric patients, including amnesia. Researchers from the University of Leipzig in Germany wanted to find out which neurotransmitters were influenced by ashwagandha. After injecting some of the chemicals in ashwagandha into rats, they later examined slices of their brain and found an increase in acetylcholine receptor activity. The researchers say, "The drug-induced increase in

acetylcholine receptor capacity might partly explain the cognition-enhancing and memory-improving effects of extracts from *Withania somnifera* [ashwagandha] observed in animals and humans."

A 2002 laboratory study indicated that ashwagandha stimulates the growth of axons and dendrites. A 2001 animal study showed ashwagandha had memory boosting ability. A 2000 study with rodents showed ashwagandha to have anti-anxiety and anti-depression effects. However, no clinical studies have been carried out to support its efficacy in humans.