



## ASTHMA

**A**sthma can be defined as a lung disorder in which spasms of the bronchial passages restrict the flow of air in and out of the lungs. In today's stressful life there is an increased exposure to number of immunological agents like allergens, dust, pollens, viruses, chemicals that acts as stimuli to liberate mediators. These mediators which include leukotrienes, prostaglandins, histamine etc. are the endogenous chemicals produced in the body which in turn cause broncho-constriction. Another consequence of this exposure is the generation of free radicals which are the culprits causing oxidative damage leading to shortness in breathing. One of the other common causes of asthma may be hereditary.

Number of herbs are reported in Ayurveda, that provides as a whole protection against asthmatic attacks naturally without any side effects and gradually helps you to recover from asthma.

### **Adhatoda vasica**

Adhatoda vasica commonly known as Vasaka is indigenous to India, where it is found in sub-Himalayan track. It has been used for the treatment of various diseases and disorders, particularly for the respiratory tract ailments. In Ayurveda, the juice expressed from the leaves and the decoction of the leaves and roots are useful in asthma, bronchitis, and other chronic coughs. Dried leaves are used in dhoomapana (smoking) in the treatment of bronchial asthma.

Preclinical studies have shown that the alkaloids from Adhatoda vasica showed pronounced protection against allergen-induced bronchial obstruction in guinea pigs. Pharmacological effects of plant extracts in humans need to be further studied.

### **Ocimum sanctum**

Tulsi indigenous plant of India botanically known as Ocimum sanctum has been used historically since the vedic period. Hindus regard it as an earthly manifestation of goddess Vrindavani, who is dear to Lord Vishnu. Holy basil has number of therapeutic applications. To mention few of them include stomachic, anthelmintic, antipyretic; useful in diseases of the heart and blood, asthma, bronchitis etc.

The anti-asthmatic activity of the extract of dried and fresh leaves, and the volatile and fixed oils of Ocimum sanctum was evaluated against histamine and acetylcholine-induced pre-convulsive dyspnea (PCD) in guinea pigs. The extract of fresh leaves, volatile oil extracted from fresh leaves and fixed oil from the seeds significantly protected the guinea pigs against histamine-and acetylcholine-induced PCD. These extracts also inhibited hind paw edema induced in rats by treatment with carrageenan, serotonin, histamine of PGE<sub>2</sub>.

The leaves of the *Ocimum sanctum* plant were tried in cases of bronchial asthma, the *Ocimum sanctum* was found to be highly efficacious.

### **Picrorrhiza kurroa**

Kutki botanically known as *Picrorrhiza kurroa* is a small perennial herb from the Scrophulariaceae family, found in the Himalayan region. The name 'Kutki' seems to have been derived from the Sanskrit name 'Katuka', which means bitter taste. It is a well-known herb in the Ayurvedic system of medicine and has historically been used to treat disorders of the liver and upper respiratory tract, asthma, reduce fevers, and to treat dyspepsia, chronic diarrhea, and scorpion sting.

A trial was carried out using crude rhizome powder of *Picrorrhiza kurroa* as monotherapy in high doses on patients of obstructive airway diseases. A significant reduction in the global score of respiratory sign and symptoms was observed along with reductions in the eosinophil count of the blood. There was significant improvement in the respiratory functions and viscosity of the sputum decreased with one week of treatment. Preclinical studies also reported that *Picrorrhiza kurroa* prevented allergen- and platelet-activating factor-induced bronchial obstruction (10 mg/kg orally; 0.5 mg inhalative).

### **Tylophora asthmatica**

*Tylophora asthmatica* (syn. *Tylophora indica*) commonly known as Indian ipecac has its long-standing use as a folk remedy for asthma, and other respiratory problems like bronchitis, rheumatism, and dermatitis.

*Tylophora asthmatica* is clinically trialed in 110 bronchial asthma patients. After six days treatment, 62% of the patients consuming tylophora reported experiencing moderate to complete relief of their asthma symptoms compared to 28% in the placebo group. Moreover, when patients were switched from the placebo to the active group and vice versa, similar positive trends could be seen, with 50% of the tylophora group and 11% of the placebo group reporting symptomatic relief. In a follow-up study, the extract of *Tylophora asthmatica* leaves exhibited moderate to complete improvement in asthmatic symptoms in 56% of the patients compared to 32% in the placebo group.

In another study one group received either 350 mg of *Tylophora* leaf powder or placebo daily in the first week. A second group of asthmatics were given a similar amount of the leaf for seven days followed by an anti-asthmatic drug combination. Overall, results of the study showed the amount of oxygen in the lungs (e.g., vital capacity) increased in those using the leaf, but decreased in those using the placebo. In addition, those taking the herb had a notable nighttime reduction in their symptoms of shortness of breath.

## **CONTACT US**

**Dr. Ilangoan Ramasamy, B.S. (Zoology), B.S.(Ag), M.S.(Ag), Ph.D. (Ag)**  
**AgriInfoTech, Inc. 166 Lawrence Road, Salem NH-USA 03079**  
**Ph: 603-894-7346, 603-781-9097**  
**[WWW.AGRIINFOTECH.COM](http://WWW.AGRIINFOTECH.COM)**