

Herbs for the Treatment of Acute Infections

Andrographis

Andrographis paniculata is grown in gardens in India where it is highly valued by the local people as a medicine. In Ayurvedic medicine, Andrographis is used as a bitter tonic, stomachic, antipyretic and laxative. It increases appetite, strengthens digestion and reduces biliousness.

The herb is utilized for the treatment of diabetes, debility and hepatitis. In traditional Chinese medicine Andrographis is regarded as bitter and 'cold' and used to treat throat infections, acute or chronic cough, influenza with fever, skin disorders and snake bite. As Andrographis is a 'cold' herb, it is ideally suited to treating acute infections, which are 'hot' conditions.¹ In Thai traditional medicine, Andrographis is used as an antipyretic and to treat abscess, herpes simplex, herpes zoster and diarrhoea.²

Key constituents of Andrographis include diterpenoid lactones, collectively referred to as andrographolides.

Clinical Studies

Andrographis has shown immunostimulant activity for the treatment of bacterial and viral respiratory infections in several uncontrolled clinical trials in China. In one study, Andrographis achieved a lowered body temperature during the common cold.

Symptoms of common cold were significantly decreased by the second day of treatment with Andrographis extract (containing 60 mg/day of andrographolides, given for 5 days) compared to placebo in a randomized, double-blind trial.³

In two earlier double-blind, placebo-controlled trials, treatment with Andrographis significantly improved symptoms and hastened recovery of common cold. The dosage was equivalent to 6 g per day of Andrographis in one trial and 48 mg per day of andrographolides in the other. Andrographis (containing 11.2 mg andrographolide/day) given to children in a randomized, double-blind trial significantly decreased the incidence of colds compared to placebo.

In pharyngotonsillitis patients, Andrographis was as effective as paracetamol in providing relief of fever and sore throat, compared to baseline values. Other conditions successfully treated in uncontrolled trials include infective hepatitis, which supports the hepatoprotective activity demonstrated by both Andrographis extract and andrographolides in experimental models.

Echinacea

Echinacea has a long history of use amongst Native Americans, particularly the root, which was used for toothache, sore throat, fits, stomach cramps, septic conditions, rabies and as an antidote for venomous bites including snakebite.⁴ The Eclectic physicians, natural therapists of the late 19th and early 20th centuries in the USA, adopted the plant into their materia medica. They prescribed Echinacea for a wide range of conditions, mainly infections and envenomations (venomous bites), chronic disorders and conditions suggestive of autoimmunity. They were also not averse to using Echinacea long-term. In both Native American and Eclectic texts *E. angustifolia* is more often cited than other species such as *E. purpurea*.

Pharmacological studies have indicated that a single constituent is not responsible for the activity of Echinacea and many constituents may contribute. Alkylamides are widely regarded to be the most active constituents.^{5,6} Only the alkylamides were detected in the bloodstream following ingestion of high quality *Echinacea angustifolia* and *E. purpurea* root tablets by 11 healthy volunteers.⁷

Clinical Studies: Mechanism of Action

A clinical study tested the effect of an *Echinacea purpurea* root tincture on the phagocytic activity of human granulocytes following oral administration for a period of 5 days compared to placebo. While Echinacea was given, phagocytic activity remained high. When Echinacea was stopped, phagocytic activity remained well above normal for a few days, indicating a residual stimulating effect when Echinacea is stopped. There was no depleting effect on phagocytosis where activity dropped to less than normal.

A 2005 clinical study involving healthy volunteers found that high quality *Echinacea angustifolia* and *E. purpurea* root tablets increased white cell counts and increased the expression of heat shock proteins (a nonspecific activation of the immune system).⁸

Clinical Trials: Common Cold

There are problems assessing the clinical trial evidence for Echinacea due to poor definition of products and poor trial design. Despite this, a systematic review concludes there is a clear indication that *Echinacea purpurea* root may be effective for the treatment of common cold.⁹

Holy Basil Leaf & Essential Oil

Ocimum tenuiflorum is regarded a sacred plant in Hindu culture, hence the common English names: holy basil, sacred basil. It belongs to the same genus as garden or sweet basil (*Ocimum basilicum*) and is also an aromatic plant with a characteristic essential oil.

The aerial parts of Holy Basil are highly regarded in Ayurvedic traditional medicine and used fresh or dried to treat skin diseases, impurities of blood, malaria, gastric and hepatic disorders, chronic fever, haemorrhage, catarrh and bronchitis. Fresh leaf combined with honey and ginger juice is a good expectorant, and is beneficial for coughs, bronchitis and children's fever.^{10,11} Aboriginal Australians used Holy Basil for colds and as a mild tonic.¹² It was traditionally used in Vietnam for many conditions including common cold, influenza and headache.¹³ Holy Basil is also used in Thai and Fijian traditional medicine with additional uses including stress, to improve blood circulation, as a tonic and to treat peptic ulcer.^{2,14} Several species of basil, especially Holy Basil (*Ocimum tenuiflorum*) are regarded as the most sacred plants in the Hindu religion. The leaves are used for ceremonies including weddings and sacred rituals.¹⁵ In many parts of India the fresh Holy Basil plant is worshiped daily as a ritual for family well-being and often picked and eaten fresh for good health.

Key constituents of Holy Basil include the essential oil (rich in monoterpenes and sesquiterpenes, typically eugenol), flavonoids and polyphenols.

Holy Basil has demonstrated antitussive, immune stimulating activity and adaptogenic activity from oral and injected administration in experimental models. Improved physical endurance, prevention of stress-induced ulceration, improved resistance against hepatotoxicity, normalization of plasma corticosterone and stimulation of humoral immunity were observed.¹⁶⁻¹⁹

Clinical Studies

Clinical evaluation of Holy Basil for these activities is lacking, but uncontrolled trials show benefit in tropical

eosinophilia (improved breathlessness and vitality) and diabetes.²⁰⁻²³

Synergistic Formulation

These herbs and the essential oil of Holy Basil complement each other in a very potent formulation with the following actions:

- enhanced immune function,
- relief of mucous congestion,
- enhanced response to stress.

Indications

- Prevention and treatment of upper respiratory tract infections, especially acute infections of common cold, influenza, tonsillitis, sinusitis.
- Treatment of other acute and chronic infections, especially acute hepatitis.

Cautions and Contraindications

Not recommended during pregnancy.

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