

Expert Herbal Reality Resource

Skullcap

Names

Botanical Name *Scutellaria lateriflora* L

Family: Lamiaceae

Common names: Skullcap, Virginia skullcap, Mad-dog skullcap, Mad-dog weed, Quaker bonnet, Blue pimpernel, Hood-wort

Description

The genus *Scutellaria* in the Lamiaceae (mint) family has approximately 350 species, some of which are medicinally active. A perennial herb native to North America and Canada favouring woods, thickets and damp areas such as riverbanks and marshes.



The name *Scutellaria* comes from the Latin *scutella*, meaning 'small dish' and refers to the pouch-like appearance of the fruit's calyx. It has slender, toothed leaves and pale blue, or occasionally white or pink flowers produced on one side of the stem.

Not to be confused with Baical skullcap (*Scutellaria baicalensis*), which is also used in western herbal medicine and one of the most widely prescribed herbs in Traditional Chinese medicine. Baical skullcap has denser racemes of larger purple/blue flowers.

It is important to ensure you have the correct species. Some skullcap labelled as *S. lateriflora* in garden nurseries can in fact be *S. altissima*, which is a showier plant. *Scutellaria lateriflora* can be adulterated, or substituted with other plants, so take care to ensure you obtain it from a reputable source. The whole aerial parts are used, best harvested while in flower late in summer.

Constituents

- **Flavonoids** – predominantly baicalein and its glycoside baicalin, wogonin, scutellarein, scutellarin, lateriflorein. In addition - apigenin, hispidulin and luteolin (1,2,3,4)
- **Iridoid glycoside:** catapol (1,2,4)
- **Volatile oils:** limonene, humulene, terpinol (1,2,3)
- **Tannins** (1,2,3)
- **Serotonin and melatonin** (1,5)

Traditional use

Skullcap was used by Native American tribes to relieve breast pain, promote menstruation and in child birth to help expel the placenta. It was used within ceremonies for the transition of girls to womanhood and has been used variously for treating stress, insomnia, premenstrual syndrome and diarrhoea.

In the 18th century Skullcap was being used in mainstream American medicine for the treatment of rabies, particularly for the hysteria associated with this awful disease. This use as a 'cure' for rabies was subsequently discredited but not before earning it common names such as *Mad dog weed*. Undoubtedly it would have helped to calm any anxiety and reduce spasm in those with the disease.

In the 19th century the Physiomedicalists were using Skullcap as a nervine for conditions of excitability, phobias, anxiety and seizures.

It was considered a specific remedy for the convulsive twitchings of *St Vitus' dance* † now known to have been an umbrella term for various types of conditions with movement disorders.

Traditional actions

Nervine tonic, anxiolytic, antispasmodic, antioxidant, anti-inflammatory, mild bitter.

Traditional energetic characteristics are:

- Taste: Bitter, astringent
- Potency: Cooling
- Quality: Light, dry



What practitioners say

Nervous system: It is a remedy par excellence for relaxing an excitable nervous system. Widely used in western herbal medicine for anxiety and insomnia, palpitations, neuralgia, phobias, muscular twitching, tremors and in epilepsy.

It relaxes at the same time as acting as a tonic for the nervous system. It has good use in debility within a picture of nervous tension. Often prescribed in combination with herbs such as St John's wort and Oats or adaptogenic herbs such as Ashwagandha or Gotu kola.

It can be of good benefit to aid withdrawal from barbiturates and tranquillizers.

It can be taken at the onset of a panic attack and some people find it useful to carry a small bottle of the tincture with them to dose with if they feel acute anxiety coming on.

Gynaecological: Useful in easing any associated nervous tension or emotional lability, skullcap can be put to good use in premenstrual syndrome.

Cardiovascular system: Skullcap can be of benefit in palpitations or in hypertension (in combination with other herbs).

Digestive system: It can be given for digestive problems associated with stress, such as irritable bowel syndrome. The effects of relaxing the higher centres of the nervous system having a knock-on effect on the gut.

Fatigue: Useful in fibromyalgia or post viral fatigue syndrome in combination with oats and certain adaptogens such as ashwagandha, skullcap can be excellent for situations where one feels 'tired and wired'.

Evidence

In terms of the medicinal effects of the whole plant, unlike *Scutellaria baicalensis*, little has been carried out in the way of robust scientific research on Skullcap, (*Scutellaria lateriflora*), when not in a combination product with other herbs.

Antioxidant potential studies showed that there are no significant differences between *S. lateriflora*, *S. baicalensis* and a third species – *S. racemosa*. (6)

A piece of work was done in 2014 looking at clinical applications of certain herbal medicines for anxiety and insomnia concerning patients with bipolar disorder. Skullcap, with the proposed mechanism of action being modulation of GABA receptors, showed some efficacy in meta-analysis of RCT within the psychiatric population for insomnia and marked efficacy in at least one RCT on healthy subjects for anxiety. (1,7)

A small single-dose study was carried out on 19 healthy subjects with skullcap, the effects monitored and evaluated at regular intervals following administration. There was a noticeable decrease in anxiety with no adverse effects on cognition or energy levels. (8)

In a placebo-controlled, double-blind, crossover study, 43 healthy, relatively non-anxious participants were randomised to taking 350 mg skullcap three times daily or placebo, each over two weeks. In this population there was no significant difference between skullcap and placebo, however, there was a significant group effect, suggesting a carryover effect of skullcap.

With regard to Total Mood Disturbance measured by the Profile of Mood States, there was a significant decrease from pre-test scores with skullcap but not placebo. Skullcap significantly enhanced global mood without a reduction in energy or cognition. (9)

Further studies assessing the anti-anxiety effects of skullcap in notably anxious participants is required.

Safety

Authentic American Skullcap is generally considered to be a very safe remedy when given within the therapeutic dosage range.

Limited studies on its use in pregnancy have shown no developmental or other harmful effects. It has a long history of use in women during pregnancy and lactation.

Over-dosage is said to cause confusion, stupor, and sometimes involuntary muscle spasms and twitches similar to epilepsy, however the authenticity of the herb ingested cannot be always verified in reported cases.



Adulteration or substitution can happen with any herb and Skullcap appears to have a bit of a reputation for this. Adulteration or substitution has occurred using other species of skullcap, or other herbs from the mint family and notably with hepatotoxic plants such as those of the *Teucrium* species. The 22nd edition of the US Dispensary (1937) described *Scutellaria lateriflora* as one of the most substituted and adulterated herbs in the *Materia Medica*. (10) This problem was more prevalent in times gone by, however, it remains paramount to source from reputable stockists.

Dosage

3-6 g per day of the dried aerial parts

2-4.5 ml per day of a 1:2 liquid extract or equivalent capsule or tablet form

References

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