

Expert Herbal Reality Resource

Henbane

Names

Botanical Name *Hyoscyamus niger* L

Family: Solanaceae

Common names: Henbane, Hogbean, Jupiter's bean, Devil's eye, Stinking nightshade



Description

This striking-looking plant is one of 15 species within the *Hyoscyamus* genus. A member of the Solanaceae family to which belong tomatoes, tobacco, potatoes, peppers, aubergines and the medicinal members Deadly nightshade and *Datura*. There are annual and biennial forms of henbane, the biennial being thought to be superior for medicinal use.ⁱ It can grow up to a height of around a metre. Thought to be native of a broad region of Eurasia, it has naturalised in many regions globally and whilst not considered a common plant, it has a reputation as a noxious weed in North America. It prefers disturbed or cultivated habitats but also thrives in wild coastal areas and relishes hot summers.ⁱⁱ

Henbane has pale green, coarsely-toothed leaves up to 30 cm long and burgundy-veined, creamy-yellow bell-shaped flowers, with a deep burgundy throat that appear from spring to autumn. The fruit is described as *pyxis* in shape – an urn-shaped capsule with a lid-like top that when opens spills the seeds. It has a certain sinister beauty about it. The entire plant is hairy, sticky and has a strong and unpleasant odour to entice the blowflies that are its main pollinators.

The fresh or dried leaves or flowering tops are used medicinally, occasionally the seeds.

Constituents^{iii, iv}

- **Tropane alkaloids:** principally hyoscyamine, hyoscine (scopolamine), atropine
- **Flavone glycosides:** quercetrin, rutin, Kaempferol
- **Volatile amines:** choline, methylpyrroline pyridine

Traditional use

Henbane has a long history of use across our herbal medicine traditions. It was often used as an anaesthetic, analgesic, spasmolytic or sedative and was sometimes given to women in childbirth in combination with opium poppy to bring relief in the form of a 'twilight sleep' a practice noted on records from Wiltshire.^v

Pain-relieving necklaces were made from the root and placed around the necks of children to ease teething or prevent fitting.^v

Henbane was one of the plants used in soporific sponges or *spongia somnifera* and pomanders or 'sleeping apples' used prior to anaesthesia back in the Middle Ages. ^{vi}

In Tibetan medicine the seeds have been used as a remedy against intestinal worms, tumours, toothache and inflammation of the lungs. ^{vii}

A paste of the seeds is used in Ayurvedic medicine to be applied over painful joints, including for gout and also for neuralgic or dental pain. It is also prescribed for tremor in cases of Parkinson's disease and for spasm within the smooth muscle.

It has a tradition of use traceable back to the Babylonians and a long association with soothsaying, witchcraft and magic.

Traditional actions

Anticholinergic - antispasmodic, especially indicated for urinary spasm, sedative, narcotic and analgesic

What practitioners say

Caution is key and practitioners will only ever use such a herb if no other will suffice. Drop doses of this herb are usual and are prescribed when such circumstances arise, with a very gradual increase if required and never exceeding a maximum daily dose.

Urinary system: It is of use for acute presentations such as renal colic, being as it is spasmolytic on the smooth muscle of the urinary tract. Practitioners are ever watchful in case of urinary retention for which it is contraindicated.

Digestive system: Henbane can be a valuable remedy for severe spasm in the gut where other, milder herbs may not be as effective, including for use in biliary colic (gall bladder spasm). It can significantly slow down the transit time of the gut and reduce the secretory ability so has sometimes been used in cramping associated with severe bouts of diarrhoea.

Respiratory system: Datura is sometimes thought to be more indicated for asthma, however henbane is also useful here and can also be helpful in cases of whooping cough.

Nervous system: Henbane can be indicated in Parkinson's disease, for use in tremors or excessive salivation. In Ayurvedic medicine it is often used in a combination therapy for this condition. ^{viii} It is also of use in neuralgia and myalgia and can help with the symptoms of Meniere's disease and motion sickness.

Externally: It has been used topically in the form of an oil for neuralgia including sciatic pain and myalgia and gout.



Evidence

The different alkaloids have slightly different properties, however as a whole, henbane inhibits the release of the neurotransmitter acetylcholine and thus has a dampening down effect on the parasympathetic portion of the autonomic nervous system. Henbane causes a decrease in sweat, salivary, gastric and bronchial secretions, lessens the tone and motility of smooth muscle in the urinary and gastrointestinal tracts and increases the pulse rate.

There is a paucity of quality human trials data on henbane however, a recent small randomised clinical trial was carried out on the effects of propolis combined with henbane for clinical symptoms in patients with acute respiratory syndrome associated with Covid-19. The formulation was given to 50 patients of mixed sex between the ages of 18 and 75 in the form of a syrup. A significant improvement was observed in the intervention group on a number of symptoms including reduction of cough, shortness of breath and chest pain, compared to those on placebo. These improvements became more pronounced with the increasing number of days of treatment. These initial findings are promising and call for larger studies.^{ix}



Safety

This herb is a poison. In the UK it falls under the legislation for Human Use Regulations 2012 within the schedule 20 part 2 herbs. This means that it is a practitioner-only medicine and has clear maximum weekly and single doses.^x The reason for this is that it has a narrow therapeutic window, (the effective therapeutic dose is close to the poisonous one).

Symptoms of over-dosage can start with a dry mouth, dry skin, dilated pupils, warm, flushed skin and agitation, going on to include impaired vision, delirium, hallucinations, convulsions and coma. It can cause death from heart or respiratory failure. Definitely not a plant to mess with.

It is certainly contraindicated in pregnancy and lactation and also in glaucoma, tachycardic arrhythmia (rapid heart rate), and urinary retention.

As henbane is classed as a restricted herb within UK legislation it can only be prescribed following a one-to-one consultation with a qualified practitioner.^x In many countries the use of henbane is illegal.

Dosage

Maximum weekly dose is 20 ml of a 1:10 tincture

Maximum single dose: 100mg

Maximum daily dose: 300mg

Practitioners start low and only slowly work upwards if required, in drop doses whilst monitoring closely. Effects can vary between individuals.

References

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