

Expert Herbal Reality Resource

Brahmi

Names

Botanical Name *Bacopa monnieri* (L) Pennel

Family: Scrophulariaceae

Common names: bacopa, herpestis (Eng), jalabrahmi (Hindi), brahmi (Sanskrit)

Alternate botanical names: *Herpestis monnieri* Kunth



Description

Brahmi is a creeping annual plant that loves water and is often found spreading across river banks. It is a small, prostrate, glabrous and fleshy herb with particularly soft and succulent leaves. The stems of the plant are 10-30cm in length. Brahmi flowers are blue or white with purple veins and are often larger than the leaves. It can also be found in higher altitudes, up to 1300m.

Constituents

- **Triterpenoid saponins:** bacosides A and B
- **Triterpenes** incl bacosine
- **Flavonoids**
- **Alkaloids** incl brahmine, herpestine

Several brahmi constituents have been linked to protective effects against pathological causes of neurological diseases.¹

Traditional use

Brahmi is documented in ancient Indian texts as far back as the 6th century being widely used to promote intellect and treat 'dis'-eases of the mind. It was used in mental disorders, epilepsy (*apasmara*), mania and hysteria (*unmada*). It was seen specifically to enhance the quality of *sadhaka pitta* and this directly influence the nature of consciousness. It is widely used to aid recovery from exhaustion, stress and debility where there is aggravation of *vata* and is a specific herb for all conditions with a deficient *majja dhatu*.

Traditional actions

Traditional Ayurvedic characteristics are

Rasa (taste) Bitter, sweet

Virya (action) Cooling

Vipaka (post-digestive effect) Sweet

Guna (quality) Light, flowing (*sara/laxative*)

Dosha effect: balances *vata*, *pitta* and *kapha*, in excess stimulates *vata*

Dhatu (tissue) All tissues, especially plasma, blood, nerve
Srotas (channels) Circulatory, digestive, nervous, excretory

Traditional Ayurvedic qualities are

Vatahara Calms *vata*.
Anuloma Redirects the flow of *vata* downwards.
Unmadahara Reduces mental illness.
Praja shakti Increases intellectual power.
Hridaya Heart tonic.
Majjadhātu Rasayana Rejuvenative, particularly to the nervous system.
Ayushya vardhana Increases longevity.
Balyam Gives strength (especially to the mind).
Jeevaniya Promotes energy.
Medhya Nervine.
Nidrajnana Promotes sleep.
Kushtaghna Alleviates skin conditions.

What practitioners say

Cognitive functions: Brahmi improves memory, learning ability and concentration. It may be used as a component of a regime for dementia, and neurological conditions such as Parkinson's disease, and attention deficit hyperactivity disorder.



Stress and exhaustion: Brahmi has adaptogenic properties, being useful managing in anxiety and depression and is well suited to helping with insomnia. It combines convalescent tonic properties (useful in the recovery from illness and exhaustion) with calming properties applicable to symptoms of nervous or muscle tension, including palpitations, IBS, and menstrual cramps.

Urinary: Brahmi can cool the heat of cystitis and pain of dysuria.

External Application: As a medicated oil Brahmi is a neuralgic in joint pain. It is used as a head rub for headaches and to clear the mind. It is also used to encourage hair growth.

Evidence

Most of the clinical research data has concluded that the most demonstrable benefit of brahmi on cognitive functions is on memory performance. An early double-blind randomized, placebo control study showed among adults aged between 40 and 65 years these benefits could be maintained up to 3 months after the study.ⁱⁱ A later review of clinical trial evidence for daily doses of 300-450 mg brahmi extract also concluded the main benefits were on memory recall although conclusions were compromised by the mixed quality of the evidence.ⁱⁱⁱ One study showed distinct benefits on memory performance in older persons,^{iv} another demonstrated, compared to placebo a wider range of benefits

including enhanced auditory verbal learning, word recall memory, the ability to ignore distractions, as well as depression and anxiety scores, and reducing heart rate.^v Another showed that 300mg per day of a brahmi product significantly improved working memory performance, especially spatial working memory accuracy. There were also benefits on visual information processing.^{vi}

One systematic review concluded that there was preliminary promising benefits for *Bacopa monnieri* for improving elements of cognition, behaviour and attention-deficit domains in child and adolescent populations and that it was safe in this context.^{vii}

Safety

No problems expected. As brahmi is rich in detergent saponins there is a theoretical negative impact of long-term use in cases of coeliac disease, fat malabsorption and deficiency of fat-soluble vitamins, and also in bile duct problems. However there is no evidence of such difficulties.

Dosage

2–6g/day dried. The fresh juice is popular in India: 3 x 1 tsp/day



References

- ⁱ Jeyasri R, Muthuramalingam P, Suba V, et al. (2020) *Bacopa monnieri* and Their Bioactive Compounds Inferred Multi-Target Treatment Strategy for Neurological Diseases: A Cheminformatics and System Pharmacology Approach. *Biomolecules*. 10(4):536
- ⁱⁱ Roodenrys S, Booth D, Bulzomi S, et al. (2002) Chronic effects of Brahmi (*Bacopa monnieri*) on human memory. *Neuropsychopharmacology*. 27(2): 279-281
- ⁱⁱⁱ Pase MP, Kean J, Sarris J, et al. (2012) The cognitive-enhancing effects of *Bacopa monnieri*: a systematic review of randomized, controlled human clinical trials. *J Altern Complement Med*. 18(7): 647-652
- ^{iv} Morgan A, Stevens J. (2010) Does *Bacopa monnieri* improve memory performance in older persons? Results of a randomized, placebo-controlled, double-blind trial. *J Altern Complement Med*. 16(7): 753-759
- ^v Calabrese C, Gregory WL, Leo M et al. (2008) Effects of a standardized *Bacopa monnieri* extract on cognitive performance, anxiety, and depression in the elderly: a randomized, double-blind, placebo-controlled trial. *J Altern Complement Med*. 14(6): 707-713
- ^{vi} Stough C, Downey LA, Lloyd J, et al. (2008) Examining the nootropic effects of a special extract of *Bacopa monnieri* on human cognitive functioning: 90 day double-blind placebo-controlled randomized trial. *Phytother Res*. 2008;22(12):1629-1634
- ^{vii} Kean JD, Downey LA, Stough C. (2016) A systematic review of the Ayurvedic medicinal herb *Bacopa monnieri* in child and adolescent populations. *Complement Ther Med*. 29: 56-62