Bacopa

Bacopa monnieri (L.) Wettst.; brahmi, water hyssop. Clinically studied extracts CDRI 08 (KeenMind, Synapsa) and BacoMind — standardized to 45–55% bacosides.

Bacopa is the botanical nootropic with the most replicated placebo-controlled evidence, a settled dose, and a genuinely narrow effect. Across meta-analyses covering 6 to 11 randomized trials and up to 645 adults, the reliable finding is improved delayed word recall and, less consistently, attention and processing speed — not global cognition. Nearly every trial reports a significant outcome and no two report the same one, the signature of multiple comparisons as much as of a drug effect. It takes 8 to 12 weeks to show anything, and one participant in ten quits over gastrointestinal upset.

SUMMARY TABLE

ATTRIBUTE	SUMMARY
What it is	A creeping wetland herb used in Ayurvedic medicine as a memory tonic. Actives are triterpenoid saponins — bacosides A and B — with cholinergic and antioxidant effects preclinically.
Best-evidenced use	Delayed recall of verbal information (Rey Auditory Verbal Learning Test). Less consistently, attention and processing speed on Trail Making B and Stroop tasks.
Clinical dose	300 mg/day of extract at ~50–55% bacosides, or 320 mg/day of CDRI 08 (trial range 200–640 mg/day). Take with a fat-containing meal; whole-herb powder is not dose-equivalent.
Time to effect	8–12 weeks. Trials of four weeks or less are consistently null; there is no credible acute memory effect.
Evidence grade	Moderate for delayed recall, limited by outcome heterogeneity. Low for global cognition and mood; insufficient for dementia.
Key risks & interactions	Gastrointestinal effects dominate: nausea, cramping, increased stool frequency; one trial reported 11% discontinuation. Cholinesterase inhibition — additive with donepezil, antagonistic to anticholinergics. Animal data suggest raised thyroxine. In vitro CYP450 inhibition. No pregnancy data.
Product quality note	Buy a named standardized extract with a stated bacoside percentage and third-party heavy-metal testing.

WHAT THE POOLED TRIALS ESTABLISH, AND WHAT THEY DO NOT

Two meta-analyses define the field and disagree instructively. Pase et al. (Journal of Alternative and Complementary Medicine, 2012) pooled six trials in 437 subjects and found that of the many cognitive measures examined, only delayed word recall on the Rey Auditory Verbal Learning Test improved reliably. Kongkeaw et al. (Journal of Ethnopharmacology, 2014) pooled nine trials in 518 participants and found improvement in Trail Making Test Part B and Stroop performance — attention and speed — not free recall.

A 2021 meta-analysis of 11 double-blind trials in 645 healthy adults at 200 mg/day or more sharpened the problem: all but one trial reported a statistically significant improvement, and no two trials found significant change on the same test — what multiple comparisons across large batteries produce, and the strongest reason to treat the effect as small and narrow. Individual trials remain supportive at the margins: Calabrese et al. (2008) gave 54 adults over 65 300 mg/day for 12 weeks and found improved delayed recall with lower anxiety and depression scores.

DOSE, LATENCY, AND FORMULATION

The dosing question is unusually settled for a botanical. Effective trials cluster at 300 mg/day of extract at roughly 50–55% bacosides, or 320 mg/day of CDRI 08; the range is 200 to 640 mg/day, with no evidence higher doses do more. Bacosides are poorly water-soluble and absorb better with dietary fat, so dosing with a meal is standard in the trial protocols.

The latency is what most buyers get wrong. Benefit in positive trials emerges between weeks 8 and 12; shorter trials are consistently null, and a product promising same-day focus is not selling on Bacopa's evidence. Whole-herb powder is not equivalent to standardized extract — bacoside content in raw material varies severalfold with source and season, which is why the literature was built on named extracts.

TOLERABILITY, INTERACTIONS, AND SUPPLY-CHAIN RISK

Gastrointestinal intolerance is the practical limiting factor. Nausea, cramping, increased stool frequency and diarrhea are characteristic, with dry mouth and fatigue less common; one trial recorded an 11% discontinuation rate. Taking the dose with food reduces but does not eliminate this. No serious adverse events have been documented in the controlled literature.

Interactions follow from the mechanism. Bacopa inhibits acetylcholinesterase, so it is plausibly additive with donepezil and rivastigmine and antagonistic to anticholinergics — oxybutynin, amitriptyline, first-generation antihistamines. Animal data showing increased thyroxine warrant caution in thyroid disease, and in vitro cytochrome P450 inhibition matters in principle for narrow-therapeutic-index drugs. Ayurvedic supply chains also carry a documented heavy-metal history.

BOTTOM LINE

A defensible twelve-week experiment for adults with subjective memory complaints who will measure the result. Buy a named standardized extract — CDRI 08 at 320 mg/day, BacoMind, or a generic stating 50–55% bacosides at 300 mg/day — with third-party heavy-metal testing, take it with a meal containing fat, and do not judge it before week eight.

Set the expectation the evidence supports: a small improvement in delayed recall of verbal material, possibly better attention on demanding tasks, and probably nothing else. Stop at twelve weeks if a pre-specified measure has not moved. Skip it if you take a cholinesterase inhibitor or an anticholinergic, have unstable thyroid disease, or are pregnant or breastfeeding. Expect gastrointestinal side effects in roughly one user in ten, and treat them as a reason to stop rather than push through. This is not a treatment for dementia.

SOURCES

1. Pase MP, et al. The cognitive-enhancing effects of Bacopa monnieri: a systematic review of randomized controlled trials. J Altern Complement Med. 2012;18(7):647–652 (6 trials, 437 subjects).
2. Kongkeaw C, et al. Meta-analysis of RCTs on cognitive effects of Bacopa monnieri extract. J Ethnopharmacol. 2014;151(1):528–535 (9 trials, 518 participants).
3. Calabrese C, et al. Standardized Bacopa monnieri extract and cognitive performance, anxiety and depression in the elderly. J Altern Complement Med. 2008;14(6):707–713 (n=54).
4. Stough C, et al. Chronic effects of Bacopa monnieri extract on cognitive function in healthy subjects. Psychopharmacology. 2001;156(4):481–484.
5. Alzheimer's Drug Discovery Foundation, Cognitive Vitality. Bacopa monnieri update (2021 meta-analysis: 11 RCTs, 645 adults; 11% GI discontinuation).
6. Bacopa monnieri: preclinical and clinical evidence, safety, and bioavailability. Review, 2025.
7. Bacopa monnieri. StatPearls, NCBI Bookshelf (dosing, adverse effects, interactions).
