

These 12 Nootropics Are the Real Smart Drugs

By Lincoln Cannon

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Nootropics are substances that enhance cognition and support healthy brain function. Sometimes people refer to them as "smart drugs" or the "limitless pill." They include various foods, nutraceuticals (supplements), and pharmaceuticals (drugs). Unfortunately none comes close to enabling any fiction-inspired capacities of superintelligence (yet), but some may make a practical difference for many people.

I've used several nootropics for years. And I'm exploring ways to incorporate others into my diet, if they're applicable to my personal situation and meet a few general criteria:

First, I look for *nootropics supported by multiple studies on humans* – not just anecdotal evidence, one study, or studies on non-human animals. Although I've nothing against the health benefits of placebo, I prefer knowing that something more than only placebo is at work.

Second, I look for *nootropics with the highest ratios of efficacy to expense*. Given innumerable options and a limited budget, I want to do more than just empty my wallet.

Third, I look for *nootropics that are legal and generally safe*. If it'll put me in a hospital or a prison, it's not worth it.

Based on those criteria, I've compiled a list of top tier natural nootropics. These are, to the best of my knowledge, the most well-researched and effective nootropics available in the United States without a prescription. This information is for educational purposes only. It is not medical advice. Please consult a physician before and during use of these and other nootropics.

1) Ashwagandha

["Berry of the Withania somnifera plant" by [Wowbobwow12](#) under [CC BY-SA 3.0](#) / cropped]

Ashwagandha, also known as Withania Somnifera, is a plant in the nightshade family and cultivated in Asia. Supplementation may provide a **notable decrease to anxiety**, according to multiple peer-reviewed, double-blind, placebo-controlled studies:

- [A Double-blind, Placebo-controlled Evaluation Of The Anxiolytic Efficacy Of An Ethanolic Extract Of Withania Somnifera](#)
- [Naturopathic Care For Anxiety: A Randomized Controlled Trial ISRCTN78958974](#)

- [A Prospective, Randomized Double-blind, Placebo-controlled Study Of Safety And Efficacy Of A High-concentration Full-spectrum Extract Of Ashwagandha Root In Reducing Stress And Anxiety In Adults](#)

Supplementation with Ashwagandha may also provide a notable decrease to stress; a subtle decrease to depression, and fatigue; and a subtle increase to motivation, social functioning, and subjective well-being. Evidence for these effects may not be as reliable. See the [Ashwagandha article on Examine.com](#) for more studies and details.

2) Bacopa Monnieri

Bacopa Monnieri is a perennial creeping herb native to wetlands worldwide. Supplementation may provide a **notable increase to memory**, according to multiple peer-reviewed, double-blind, placebo-controlled studies:

- [Meta-analysis of randomized controlled trials on cognitive effects of Bacopa monnieri extract.](#) In 2014, this meta-analysis found that Bacopa "has the potential to improve cognition, particularly speed of attention".
- [An acute, double-blind, placebo-controlled cross-over study of 320 mg and 640 mg doses of Bacopa monnieri \(CDRI 08\) on multitasking stress reactivity and mood.](#) In 2014, this study found that Bacopa "produced some adaptogenic and nootropic effects".
- [An acute, double-blind, placebo-controlled crossover study of 320 mg and 640 mg doses of a special extract of Bacopa monnieri \(CDRI 08\) on sustained cognitive performance.](#) In 2013, this study found that Bacopa "improved performance at the first, second, and fourth repetition post-dosing on the [Cognitive Demand Battery]".
- [Brahmi for the better? New findings challenging cognition and anti-anxiety effects of Brahmi \(Bacopa monniera\) in healthy adults.](#) In 2013, this study found that "The results ... are not in agreement with findings of some of the earlier studies which have found improvement both on cognitive parameters and a reduction of anxiety scores". This study also found that "there was a trend for lower state anxiety in the [Bacopa] group as compared to placebo group". See this [summary of effective dosages and timelines for Bacopa supplementation](#).
- [Does Bacopa monnieri improve memory performance in older persons? Results of a randomized, placebo-controlled, double-blind trial.](#) In 2010, this study found that "Bacopa significantly improved memory acquisition and retention in healthy older Australians".

- [Effects of a standardized Bacopa monnieri extract on cognitive performance, anxiety, and depression in the elderly: a randomized, double-blind, placebo-controlled trial.](#) In 2008, this study found that Bacopa "has potential for safely enhancing cognitive performance in the aging".
- [Examining the nootropic effects of a special extract of Bacopa monniera on human cognitive functioning: 90 day double-blind placebo-controlled randomized trial.](#) In 2008, this study found that Bacopa "significantly improved performance on the 'Working Memory' factor, more specifically spatial working memory accuracy [and] the number of false-positives recorded in the Rapid visual information processing task was also reduced".
- [Randomized controlled trial of standardized Bacopa monniera extract in age-associated memory impairment.](#) In 2008, this study found that Bacopa "is efficacious in subjects with age-associated memory impairment".
- [Chronic effects of Brahmi \(Bacopa monnieri\) on human memory.](#) In 2002, this study found that Bacopa "decreases the rate of forgetting of newly acquired information".
- [The acute effects of an extract of Bacopa monniera \(Brahmi\) on cognitive function in healthy normal subjects.](#) In 2001, this study found that Bacopa "has no acute effects on cognitive functioning in normal healthy subjects". See this [summary of effective dosages and timelines for Bacopa supplementation.](#)
- [The chronic effects of an extract of Bacopa monniera \(Brahmi\) on cognitive function in healthy human subjects.](#) In 2001, this study found that Bacopa "may improve higher order cognitive processes that are critically dependent on the input of information from our environment such as learning and memory".

Supplementation with Bacopa Monnieri may also provide a subtle decrease to anxiety, depression, and forgetting. Evidence for these effects may not be as reliable. See the [Bacopa Monnieri article at Examine.com](#) for more studies and details. Also check out my [article on Bacopa supplementation](#). Bacopa is an ingredient in [Thrivous Clarity](#).

3) Creatine

Creatine is a nitrogenous organic acid that occurs naturally in vertebrates. It is best known for benefits related to strength training. In addition to those benefits, supplementation may provide a **notable decrease to fatigue**, according to multiple peer-reviewed, double-blind, placebo-controlled studies:

- [Effect of creatine supplementation and sleep deprivation, with mild exercise, on cognitive and psychomotor performance, mood state, and plasma concentrations of catecholamines and cortisol.](#)
- [Low dose creatine supplementation enhances sprint phase of 400 meters swimming performance.](#)
- [Prevention of traumatic headache, dizziness and fatigue with creatine administration. A pilot study.](#)
- [Creatine monohydrate in DM2/PROMM: a double-blind placebo-controlled clinical study. Proximal myotonic myopathy.](#)
- [Creatine monohydrate in ALS: effects on strength, fatigue, respiratory status and ALSFRS.](#)
- [Effects of creatine on mental fatigue and cerebral hemoglobin oxygenation.](#)
- [Effects of creatine supplementation on oxidative stress and inflammatory markers after repeated-sprint exercise in humans.](#)

Supplementation with Creatine may also provide a notable decrease to depression; a subtle increase to fatigue resistance, subjective well-being, and cognition; and a subtle decrease to symptoms of sleep deprivation. Evidence for these effects may not be as reliable. See the [Creatine article at Examine.com](#) for more studies and details.

4) Feverfew

Feverfew is a perennial herb that was native to Eurasia and has spread around the world. Supplementation may provide a **notable decrease to migraine**, according to multiple peer-reviewed, double-blind, placebo-controlled studies:

- [Efficacy and safety of 6.25 mg t.i.d. feverfew CO₂-extract \(MIG-99\) in migraine prevention--a randomized, double-blind, multicentre, placebo-controlled study.](#)
- [The efficacy and safety of Tanacetum parthenium \(feverfew\) in migraine prophylaxis--a double-blind, multicentre, randomized placebo-controlled dose-response study.](#)
- [Efficacy of feverfew as prophylactic treatment of migraine.](#)
- [Randomised double-blind placebo-controlled trial of feverfew in migraine prevention.](#)

See the [Feverfew article at Examine.com](#) for more studies and details.

5) Fish Oil (Omega 3)

Fish Oil, as the name suggests, is an oil that accumulates in the tissues of some fish species. Supplementation may provide a **notable decrease to depression**, according to multiple peer-reviewed, double-blind, placebo-controlled studies:

- [Meta-analysis Of The Effects Of Eicosapentaenoic Acid \(EPA\) In Clinical Trials In Depression](#)
- [Omega-3 For Bipolar Disorder: Meta-analyses Of Use In Mania And Bipolar Depression](#)
- [Complementary And Alternative Medicine For The Treatment Of Major Depressive Disorder](#)
- [Omega-3 Supplementation Lowers Inflammation And Anxiety In Medical Students: A Randomized Controlled Trial](#)
- [Omega-3 Supplementation Lowers Inflammation In Healthy Middle-aged And Older Adults: A Randomized Controlled Trial](#)
- [The Mothers, Omega-3, And Mental Health Study: A Double-blind, Randomized Controlled Trial](#)
- [EPA But Not DHA Appears To Be Responsible For The Efficacy Of Omega-3 Long Chain Polyunsaturated Fatty Acid Supplementation In Depression: Evidence From A Meta-analysis Of Randomized Controlled Trials](#)
- [Omega-3 Fatty Acids As A Treatment For Perinatal Depression: Randomized Double-blind Placebo-controlled Trial](#)
- [Omega-3 Fatty Acids And Supportive Psychotherapy For Perinatal Depression: A Randomized Placebo-controlled Study](#)
- [Supplementation Of A Low Dose Of DHA Or DHA+AA Does Not Prevent Peripartum Depressive Symptoms In A Small Population Based Sample](#)
- [Effect Of Maternal Docosahexaenoic Acid Supplementation On Postpartum Depression And Information Processing](#)
- [Omega-3 Fatty Acids For Major Depressive Disorder During Pregnancy: Results From A Randomized, Double-blind, Placebo-controlled Trial](#)
- [Efficacy Of Ethyl-eicosapentaenoic Acid In Bipolar Depression: Randomised Double-blind Placebo-controlled Study](#)
- [Addition Of Omega-3 Fatty Acid To Maintenance Medication Treatment For Recurrent Unipolar Depressive Disorder](#)
- [A Double-blind, Placebo-controlled Study Of The Omega-3 Fatty Acid Docosahexaenoic Acid In The Treatment Of Major Depression](#)
- [A Dose-ranging Study Of The Effects Of Ethyl-eicosapentaenoate In Patients With Ongoing Depression Despite Apparently Adequate Treatment With Standard Drugs](#)
- [Ethyl-eicosapentaenoic Acid For The Treatment Of Psychological Distress And Depressive Symptoms In Middle-aged Women: A Double-blind, Placebo-controlled, Randomized Clinical Trial](#)
- [Fish Oil Supplementation In The Treatment Of Major Depression: A Randomised Double-blind Placebo-controlled Trial](#)
- [Omega-3 Fatty Acids In Major Depressive Disorder. A Preliminary Double-blind, Placebo-controlled Trial](#)
- [The Role Of Essential Fatty Acids In Chronic Fatigue Syndrome. A Case-controlled Study Of Red-cell Membrane Essential Fatty Acids \(EFA\) And A Placebo-controlled Treatment Study With High Dose Of EFA](#)
- [Double-blind, Randomized, Placebo-controlled Trials Of Ethyl-eicosapentanoate In The Treatment Of Bipolar Depression And Rapid Cycling Bipolar Disorder](#)

- [Cognitive And Physiological Effects Of Omega-3 Polyunsaturated Fatty Acid Supplementation In Healthy Subjects](#)
- [Omega-3 Fatty Acids For Depression In Adults](#)

Supplementation with Fish Oil may also provide a subtle decrease to aggression, anxiety, cognitive decline, reaction time, and stress; and a subtle increase to cerebral blood flow, cerebral oxygenation, memory, processing accuracy, and subjective well-being. Evidence for these effects may not be as reliable. See the [Fish Oil article at Examine.com](#) for more studies and details.

6) Ginkgo Biloba

Ginkgo Biloba is a tree native to China. Supplementation may provide a **notable decrease to cognitive decline**, according to multiple peer-reviewed, double-blind, placebo-controlled studies:

- [Ginkgo Biloba for Mild Cognitive Impairment and Alzheimer's Disease: A Systematic Review and Meta-Analysis of Randomized Controlled Trials.](#) In 2016, this meta-analysis found that Ginkgo "is potentially beneficial for the improvement of cognitive function, activities of daily living, and global clinical assessment in patients with mild cognitive impairment or Alzheimer's disease".
- [Ginkgo biloba for prevention of dementia: a systematic review and meta-analysis.](#) In 2015, this meta-analysis found that "there is no convincing evidence from this review that demonstrated Ginkgo biloba in late-life can prevent the development of dementia".
- [Meta-analysis of the efficacy and safety of Ginkgo biloba extract for the treatment of dementia.](#) In 2015, this meta-analysis found that "taking [Ginkgo] is effective and safe in the treatment of dementia".
- [Efficacy and adverse effects of ginkgo biloba for cognitive impairment and dementia: a systematic review and meta-analysis.](#) In 2015, this meta-analysis found that Ginkgo "is able to stabilize or slow decline in cognition, function, behavior, and global change at 22-26 weeks in cognitive impairment and dementia, especially for patients with neuropsychiatric symptoms".
- [Efficacy and safety of Ginkgo biloba extract EGb 761 in mild cognitive impairment with neuropsychiatric symptoms: a randomized, placebo-controlled, double-blind, multi-center trial.](#) In 2014, this study found that Ginkgo "improved [neuropsychiatric symptoms] and cognitive performance in patients with [mild cognitive impairment]. The drug was safe and well tolerated".
- [Long-term use of standardised Ginkgo biloba extract for the prevention of Alzheimer's disease \(GuidAge\): a randomised placebo-controlled trial.](#) In

2012, this study found that Ginkgo "did not reduce the risk of progression to Alzheimer's disease compared with placebo". See this [review of divergent studies for Ginkgo supplementation](#).

- [Effect of Western medicine therapy assisted by Ginkgo biloba tablet on vascular cognitive impairment of none dementia](#). In 2012, this study found that Ginkgo "can improve the therapeutic efficacy as well improve cognitive ability and cerebral blood flow supply of patients with vascular cognitive impairment of none dementia (VCIND)".
- [Ginkgo biloba extract EGb 761® in dementia with neuropsychiatric features: a randomised, placebo-controlled trial to confirm the efficacy and safety of a daily dose of 240 mg](#). In 2012, this study found that "treatment with [Ginkgo] was safe and resulted in a significant and clinically relevant improvement in cognition, psychopathology, functional measures and quality of life of patients and caregivers".
- [Efficacy and tolerability of a once daily formulation of Ginkgo biloba extract EGb 761® in Alzheimer's disease and vascular dementia: results from a randomised controlled trial](#). In 2012, this study found that Ginkgo "improved cognitive functioning, neuropsychiatric symptoms and functional abilities in both types of dementia".
- [Ginkgo biloba for preventing cognitive decline in older adults: a randomized trial](#). In 2009, this study found that "compared with placebo, the use of [Ginkgo] did not result in less cognitive decline in older adults with normal cognition or with mild cognitive impairment". See this [review of divergent studies for Ginkgo supplementation](#).
- [Ginkgo biloba special extract in dementia with neuropsychiatric features. A randomised, placebo-controlled, double-blind clinical trial](#). In 2007, this study found that "the data add further evidence on the safety and efficacy of [Ginkgo] in the treatment of cognitive and non-cognitive symptoms of dementia".
- [A double-blind placebo-controlled trial of tanakan in the treatment of idiopathic cognitive impairment in the elderly](#). In 2004, this study found that Ginkgo "might be helpful in treating the early stages of primary degenerative dementia".
- [Treatment of age-related memory complaints with Ginkgo biloba extract: a randomized double blind placebo-controlled study](#). In 1998, this study found that "use of Ginkgo extracts in elderly individuals with cognitive impairment might be promising".
- [Proof of efficacy of the ginkgo biloba special extract EGb 761 in outpatients suffering from mild to moderate primary degenerative dementia of the](#)

[Alzheimer type or multi-infarct dementia](#). In 1996, this study found that "the clinical efficacy of [Ginkgo] in dementia of the Alzheimer type and multi-infarct dementia was confirmed. ... [and] found to be well tolerated".

Supplementation with Ginkgo Biloba may also provide a subtle increase to memory, cognition, sleep quality, subjective well-being, calmness, cerebral blood flow, processing accuracy, processing speed, and reaction time; and a subtle decrease to anxiety, numerical memory, and stress. Evidence for these effects may not be as reliable. See the [Ginkgo Biloba article at Examine.com](#) for more studies and details. Also check out my [article on Ginkgo supplementation](#). Ginkgo is an ingredient in [Thrivous Alpha](#).

7) Inositol

Inositol is a sugar alcohol chemical compound that exists in various forms, the most prominent of which is Myo-Inositol, which occurs widely in nature. Supplementation may provide a **notable decrease to anxiety and panic attacks**, according to multiple peer-reviewed, double-blind, placebo-controlled studies:

- [Double-blind, controlled, crossover trial of inositol versus fluvoxamine for the treatment of panic disorder.](#)
- [Double-blind, placebo-controlled, crossover trial of inositol treatment for panic disorder.](#)
- [Inositol treatment of obsessive-compulsive disorder.](#)
- [Effect of inositol on bulimia nervosa and binge eating.](#)
- [Acute inositol does not attenuate m-CPP-induced anxiety, mydriasis and endocrine effects in panic disorder.](#)

Supplementation with Inositol may also provide a subtle decrease to depression. Evidence for these effects may not be as reliable. See the [inositol article at Examine.com](#) for more studies and details.

8) L-Theanine

L-Theanine is an amino acid analogue found primarily in some plant and fungal species. Supplementation may provide a **notable increase to relaxation** without sedation, according to multiple peer-reviewed, double-blind, placebo-controlled studies:

- [Anti-stress effect of theanine on students during pharmacy practice: positive correlation among salivary \$\alpha\$ -amylase activity, trait anxiety and subjective stress.](#) In 2013, this study found that L-Theanine "intake suppressed initial stress response of students assigned for a long-term commitment of pharmacy practice".
- [Effects of l-theanine on attention and reaction time response.](#) In 2011, this study found that L-Theanine "clearly has a pronounced effect on attention

performance and reaction time response in normal healthy subjects prone to have high anxiety".

- [The effects of L-theanine \(Suntheanine®\) on objective sleep quality in boys with attention deficit hyperactivity disorder \(ADHD\): a randomized, double-blind, placebo-controlled clinical trial.](#) In 2011, this study found that L-Theanine "is safe and effective in improving some aspects of sleep quality in boys diagnosed with ADHD".
- [L-Theanine reduces psychological and physiological stress responses.](#) In 2007, this study found that "oral intake of [L-Theanine] could cause anti-stress effects via the inhibition of cortical neuron excitation".
- [The acute effects of L-theanine in comparison with alprazolam on anticipatory anxiety in humans.](#) In 2004, this study found that L-Theanine "may have some relaxing effects under resting conditions".
- [Effects of Theanine on the Release of Brain Alpha Wave in Adult Males.](#) In 2003, this study found that L-Theanine "containing tablets promote the release of alpha waves related to mental relaxation and concentration in young adult males".

See the [L-Theanine article at Examine.com](#) for more studies and details. Also check out my [article on combined Caffeine and L-Theanine supplementation](#). L-Theanine is an ingredient in [Thrivous Serenity](#) and [Thrivous Surge](#).

9) Melatonin

Melatonin is a substance found in animals, plants, fungi, and bacteria. Supplementation may provide a **notable decrease to insomnia and symptoms of jet lag**, according to multiple peer-reviewed, double-blind, placebo-controlled studies:

- [Evaluation of sleep, puberty and mental health in children with long-term melatonin treatment for chronic idiopathic childhood sleep onset insomnia.](#) In 2011, this study found that "Melatonin treatment in children can be sustained over a long period of time without substantial deviation of the development of children with respect to sleep quality, puberty development and mental health scores, as compared with the general Dutch population".
- [The effect of prolonged-release melatonin on sleep measures and psychomotor performance in elderly patients with insomnia.](#) In 2009, this study found that "nightly treatment with [Melatonin] effectively induced sleep and improved perceived quality of sleep in patients with primary insomnia aged > or =55 years", "daytime psychomotor performance was not impaired and was consistently better with [Melatonin] compared with placebo", and

Melatonin "was well tolerated with no evidence of rebound effects".

- [Prolonged-release melatonin improves sleep quality and morning alertness in insomnia patients aged 55 years and older and has no withdrawal effects.](#) In 2007, this study found that Melatonin improves "quality of sleep and morning alertness in primary insomnia patients aged 55 years and older -- suggesting more restorative sleep, and without withdrawal symptoms upon discontinuation".
- [The effects of melatonin on tinnitus and sleep.](#) In 2006, this study found that "the impact of melatonin on sleep was greatest among patients with the worst sleep quality".
- [Melatonin for the prevention and treatment of jet lag.](#) In 2002, this study found that "Melatonin is remarkably effective in preventing or reducing jet-lag, and occasional short-term use appears to be safe".

Supplementation with Melatonin may also provide a subtle increase to sleep quality, and memory; and a minor decrease to alertness. Evidence for these effects may not be as reliable. See the [Melatonin article at Examine.com](#) for more studies and details. Also check out my [article on Melatonin supplementation](#). Melatonin is an ingredient in [Thrivous Serenity](#).

10) Rhodiola Rosea

Rhodiola Rosea is a perennial flowering plant that grows on sea cliffs and mountains in cold regions of the world. Supplementation may provide a **notable decrease to fatigue**, and a **notable increase to cognition and subjective well-being**, according to multiple peer-reviewed, double-blind, placebo-controlled studies:

- [Rhodiola rosea versus sertraline for major depressive disorder: A randomized placebo-controlled trial.](#) In 2015, this study found that Rhodiola, "although less effective than sertraline, [Rhodiola] may possess a more favorable risk to benefit ratio for individuals with mild to moderate depression".
- [Rhodiola rosea for mental and physical fatigue in nursing students: a randomized controlled trial.](#) In 2014, this study found that "among nursing students on shift work, a 42-day course of [Rhodiola] compared with placebo worsened fatigue". The study notes that "four year old roots were extracted and dried to create a powdered extract that was standardized to 2.8% total rosavins". [Comparative study of Rhodiola preparations on behavioral despair of rats.](#) In 2008, this animal study found that "Rhodioloside [salidroside], and tyrosol were identified as active principles of the extract, whereas rosavin, rosarin, rosin, cinnamic alcohol, cinnamaldehyde, cinnamic acid were inactive".

- [Therapeutic effects and safety of Rhodiola rosea extract WS® 1375 in subjects with life-stress symptoms--results of an open-label study.](#) In 2012, this study found that Rhodiola "is safe and effective in improving life-stress symptoms to a clinically relevant degree".
- [The influence of adaptogens on ultraweak biophoton emission: a pilot-experiment.](#) In 2009, this study found that "after supplementation, a significant decrease concerning the experienced level of fatigue in the Rhodiola group was observed".
- [Clinical trial of Rhodiola rosea L. extract SHR-5 in the treatment of mild to moderate depression.](#) In 2007, this study found that Rhodiola "shows anti-depressive potency in patients with mild to moderate depression".
- [Acute Rhodiola rosea intake can improve endurance exercise performance.](#) In 2004, this study found that Rhodiola "can improve endurance exercise capacity in young healthy volunteers".
- [A randomized trial of two different doses of a SHR-5 Rhodiola rosea extract versus placebo and control of capacity for mental work.](#) In 2003, this study found that Rhodiola had "a pronounced antifatigue effect".
- [A double-blind, placebo-controlled pilot study of the stimulating and adaptogenic effect of Rhodiola rosea SHR-5 extract on the fatigue of students caused by stress during an examination period with a repeated low-dose regimen.](#) In 2000, this study found that "the most significant improvement in the [Rhodiola] group was seen in physical fitness, mental fatigue and neuro-motoric tests ... [and] the self-assessment of the general well-being was also significantly better".
- [Rhodiola rosea in stress induced fatigue--a double blind cross-over study of a standardized extract SHR-5 with a repeated low-dose regimen on the mental performance of healthy physicians during night duty.](#) In 2000, this study found that Rhodiola "can reduce general fatigue under certain stressful conditions".

Supplementation with Rhodiola Rosea may also provide a notable decrease to depression; a subtle increase to processing accuracy; and a subtle decrease to rate of perceived exertion, and stress. Evidence for these effects may not be as reliable. See the [Rhodiola Rosea article at Examine.com](#) for more studies and details. Also check out my [article on Rhodiola supplementation](#). Rhodiola is an ingredient in [Thrivous Clarity](#).

11) Vitamin B2 (Riboflavin)

Vitamin B2, also known as Riboflavin, is found in foods like milk, leafy vegetables, legumes, mushrooms, and almonds. Supplementation may provide a **notable decrease to migraine**, according to multiple peer-reviewed, double-blind, placebo-controlled studies:

- [High-dose riboflavin treatment is efficacious in migraine prophylaxis: an open study in a tertiary care centre.](#)
- [A combination of riboflavin, magnesium, and feverfew for migraine prophylaxis: a randomized trial.](#)
- [Effectiveness of high-dose riboflavin in migraine prophylaxis. A randomized controlled trial.](#)
- [Riboflavin prophylaxis in pediatric and adolescent migraine.](#)
- [High-dose riboflavin for migraine prophylaxis in children: a double-blind, randomized, placebo-controlled trial.](#)
- [Mitochondrial DNA haplogroups influence the therapeutic response to riboflavin in migraineurs.](#)
- [Medium-dose riboflavin as a prophylactic agent in children with migraine: a preliminary placebo-controlled, randomised, double-blind, cross-over trial.](#)

See the [Vitamin B2 article at Examine.com](#) for more studies and details. Also check out my [article on Vitamin B supplementation](#). Vitamin B2 is an ingredient in [Thrivous Clarity](#).

12) Zinc

["30 grams zinc, 3 cm in diameter" by [Jurii](#) under [CC BY 3.0](#) / cropped]

Zinc is an essential dietary mineral found in food like beans, nuts, and whole grains. Supplementation may provide **notable support for mood**, according to multiple peer-reviewed, double-blind, placebo-controlled studies:

- [Zinc Monotherapy Increases Serum Brain-derived Neurotrophic Factor \(BDNF\) Levels And Decreases Depressive Symptoms In Overweight Or Obese Subjects: A Double-blind, Randomized, Placebo-controlled Trial.](#) In 2015, this study found that "Zinc monotherapy improves mood in overweight or obese subjects".
- [Effects Of Zinc Supplementation On Efficacy Of Antidepressant Therapy, Inflammatory Cytokines, And Brain-derived Neurotrophic Factor In Patients With Major Depression.](#) In 2014, this study found that "Zinc supplementation in conjunction with antidepressant drugs might be beneficial for reducing depressive symptoms".
- [Effect Of Zinc Supplementation On Mood States In Young Women: A Pilot Study.](#) In 2010, this study found that Zinc "supplementation may be effective

in reducing anger and depression".

- [Zinc Supplementation Augments Efficacy Of Imipramine In Treatment Resistant Patients: A Double Blind, Placebo-controlled Study](#). In 2009, this study found that "zinc supplementation significantly reduced depression scores and facilitated the treatment outcome in antidepressant treatment resistant patients".

Supplementation with Zinc may also provide a subtle decrease to aggression and reaction time; and a subtle increase to cognition and subjective well-being. Evidence for these effects may not be as reliable. See the [Zinc article at Examine.com](#) for more studies and details. Zinc is an ingredient in [Thrivous Clarity](#).

13) Acetyl-L-Carnitine (ALCAR)

[Acetyl-L-Carnitine is a new addition to this list since the time of original writing.]

Acetyl-L-Carnitine is an amino acid derivative found in mammals and other eukaryotes. Supplementation may provide a **notable decrease to ammonia** to support brain detoxification, according to multiple peer-reviewed, double-blind, placebo-controlled studies:

- [Acetyl-L-carnitine Improves Cognitive Functions In Severe Hepatic Encephalopathy: A Randomized And Controlled Clinical Trial](#). In 2011, this study found that "the improvement of cognitive deficits, the reduction of ammonia, and the modification of EEG in patients treated with [Acetyl-L-Carnitine] suggest that [Acetyl-L-Carnitine] could represent a new tool in the treatment of severe hepatic encephalopathy".
- [Oral Acetyl-L-carnitine Therapy Reduces Fatigue In Overt Hepatic Encephalopathy: A Randomized, Double-blind, Placebo-controlled Study](#). In 2011, this study found that "patients with [Hepatic Encephalopathy] treated with [Acetyl-L-Carnitine] showed a decrease in the severity of both mental and physical fatigue and an increase in physical activity".
- [Carbohydrate, Protein, And Fat Metabolism During Exercise After Oral Carnitine Supplementation In Humans](#). In 2008, this study found that Acetyl-L-Carnitine "supplementation might have the potential to reduce the metabolic stress of exercise or alter ammonia production or removal".
- [Acetyl-L-carnitine Treatment In Minimal Hepatic Encephalopathy](#). In 2008, this study found that "the benefits of [Acetyl-L-Carnitine] in comparison with placebo are demonstrated in greater reductions in serum ammonia levels, as well as in improvements of neuropsychological functioning".

Supplementation with Acetyl-L-Carnitine may also provide a subtle decrease to fatigue. Evidence for this effect may not be as reliable. See the [L-Carnitine article at](#)

[Examine.com](#) for more studies and details. Also check out my [article on ALCAR supplementation](#). Acetyl-L-Carnitine is an ingredient in [Thrivous Alpha](#).

Thrivous

Because it can be unnecessarily tedious and expensive to find, buy, measure, and swallow these nootropics separately, Thrivous is combining some of them into convenient and cost-effective products with evidence-based dosages reflecting the results of the studies shared above. It's part of our mission to help you access technology with the greatest potential to improve your brain and body. If you'd like to be notified as these products become available, please [sign up for our newsletter](#).

Thrivous currently offers several nootropic products. We formulated [Clarity](#), the daily nootropic, to improve focus, memory, and mood. We formulated [Serenity](#), the nightly nootropic, to promote calm, sleep, and next-day focus. We formulated [Surge](#), the acute nootropic, for occasional use to increase energy and focus. And we formulated [Alpha](#), the nootropic geroprotector, to support healthy brain aging. Talk to your doctor about starting Thrivous nootropics today!