

TECHNICAL DATA SHEET

Memory Formula



Memory and mental function is fundamental in creating a fulfilling and productive life. As life expectancies continue to lengthen we look closer at the quality of life we can create. Being able to use our brain most effectively is paramount for all ages. Clinical nutrition provides an incredible avenue to reach our goal of optimum mental function. Mountain Peak Nutritionals' Memory formula was designed to enhance memory, improve focus and concentration, assist better learning and slow down the aging of brain cells. The ingredients utilized in Memory formula were determined by the most current scientific research available, as well as, the clinical studies that indicate the real efficacy of each ingredient. Memory formula is meant to be used for all ages from early school age through the golden years.

INGREDIENTS

Choline

Choline has traditionally been considered a B vitamin. However, this is controversial as choline can be synthesized by the human body. Choline, or its metabolites, are needed for the synthesis of cell membrane phospholipids and as a methyl donor for the synthesis of other compounds (1) Choline concentrates in the nerve tissue. Choline is a precursor to acetylcholine, which plays a vital role in the transmission of an impulse from one nerve fiber to another across a synaptic junction.

N-Acetyl-L-Carnitine

Acetyl-L-carnitine occurs naturally in the body and readily crosses the blood-brain barrier. Once in the brain it improves mitochondrial energetics, prevents oxidative damage, and enhances cholinergic neurotransmission (2). Acetyl-L-carnitine is structurally related to acetylcholine and also serves as a precursor to acetyl coenzyme A. In recent studies N-acetyl-L-carnitine has been shown to prevent age-related reduction of nerve growth factor in certain portions of the brain.

Bacopa Monniera

Bacopa monniera is also known as Brahmi, a well-known Ayurvedic herb that contains memory-enhancing constituents called bacosides. According to scientists at the Central Drug Research Institute in Lucknow, India, bacosides help repair damaged neurons by adding muscle to kinase, the protein involved in the synthesis of new neurons (3). Bacopa is primarily used to improve learning and enhance memory. In human studies it indicates the ability to increase a child's exploratory behavior and have a positive effect on recall and reaction time.

DL-Phenylalanine (free form)

DL-Phenylalanine is the racemic mix of 50% D and 50% L Phenylalanine. L-Phenylalanine is an essential human amino acid and the only form of phenylalanine found in proteins. DL-Phenylalanine is a clinically proven mood enhancer and a precursor of tyrosine. It enhances endorphin and enkephalin levels in the central nervous system.

L-Tyrosine (free form)

L-Tyrosine is a non-essential amino acid that the body synthesizes from phenylalanine. It is a precursor for the catecholamines dopamine, epinephrine, and norepinephrine. Supplemental tyrosine improves performance, memory, and learning, under extreme environmental conditions, intense exercise, or psychological stress (4). L-tyrosine is an important constituent of thyroid hormone.

L-Taurine (free form)

L-taurine is a conditionally essential amino sulfonic acid. Large amounts of taurine are found in the human brain, retina, heart, and platelets. Taurine appears to have both antioxidant and free radical scavenging activity (5).

Phosphatidylserine

Phosphatidylserine is a fat-soluble phospholipid that occurs endogenously in humans. It is the most abundant phospholipid in the human brain and is important in neuronal membrane functions. Phosphatidylserine has been shown to increase acetylcholine, norepinephrine, serotonin, and dopamine levels in patients with Alzheimer's disease (6).

Ginkgo Biloba

Ginkgo leaf and its extracts contain several active constituents including flavonoids, terpenoids, and organic acids. Ginkgo enhances functional brain activity such as mental alertness, reaction time, memory, and cognition. There is preliminary evidence that ginkgo leaf extract can inhibit toxicity and cell death induced by beta-amyloid peptides (7).

Ashwagandha

Ashwagandha contains several active constituents including alkaloids, steroidal lactones (withanolides, withaferins) and saponins. Researchers believe ashwagandha has a so-called "anti-stressor" effect. Preliminary evidence suggests ashwagandha suppresses stress-induced increases of dopamine receptors in the corpus striatum of the brain (8).

Vitamin C

Vitamin C is included as a cofactor to help potentiate antioxidant and free radical scavenging effects.

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Rhodiola Rosea

Rhodiola rosea products are standardized based on rosavin content. It also contains a phenylpropanoid glycoside called salidroside which is believed to be responsible for rhodiola's stimulant, anti-stress, and adaptogenic actions (9). Rhodiola rosea provided support for physical and mental stress in students in a double blind cross-over study. Cognitive function, memory and attention are enhanced by promoting the activity of neurotransmitters such as serotonin, dopamine and norepinephrine.

B-6 Pyridoxal-5-Phosphate

Pyridoxal-5-Phosphate is the biologically active form of B-6. It is necessary for various metabolic reactions such as transamination of amino acids, conversion of tryptophan to niacin, synthesis of gamma-aminobutyric acid (GABA) in the CNS, metabolism of serotonin, norepinephrine and dopamine (10).

B-12 Methylcobalamin

Methylcobalamin is the biologically active coenzyme form of B-12. Deficiency of B-12 is associated with impaired cognitive performance, memory loss and depression (11). B-12 is needed to prevent anemia. It aids folic acid in regulating the formation of red blood cells, improving oxygen delivery to tissues and aids in the utilization of iron (12).

Folic Acid

Folic acid has long been recognized as a brain food and is needed for energy production and the formation of red blood cells. After folic acid is absorbed, it is reduced to tetrahydrofolate and then enters a methylation cycle. Current scientific evidence indicates low folate concentrations may be related to atrophy of the cerebral cortex, particularly in people with neocortical lesions related to Alzheimer's disease (13).

Vinpocetine

Vinpocetine is a derivative of apovincamine, a compound found in the periwinkle plant. Vinpocetine increases efficient use of oxygen and glucose and stimulates production of ATP for cellular energy (14). One double-blind study showed healthy subjects exhibited an incredible boost in short-term memory function within one hour of ingesting vinpocetine (15).

Huperzine A

Huperzine A is an alkaloid isolated from Chinese club moss. Huperzine A is a potent inhibitor of acetylcholinesterase (AChE), the enzyme that breaks down acetylcholine. Huperzine A is thought to be beneficial in dementia, memory impairment and myasthenia gravis due to its effects on acetylcholine levels (16).

Memory Formula

Quantity: 60 capsules

Serving size: 1 capsule

Directions: 1 capsule, 1 to 3 times daily with food, as directed by your health care professional.

Each 3 capsules contain:

Vitamin C (as Poly C Ascorbate)	10 mg
Vitamin B6 (as Pyridoxal-5-Phosphate)	10 mg
Vitamin B12 Methylcobalamin	400 mcg
Folic Acid	800 mcg
Choline (as bitartrate)	100 mg
n-Acetyl L-Carnitine	100 mg
Bacopa monniera extract (20% bacosides A & B) (leaf)	50 mg
dl-Phenylalanine (free form)	50 mg
l-Tyrosine (free form)	50 mg
Phosphatidylserine	50 mg
Taurine (free form)	50 mg
Ashwagandha extract (5% withanolides) (root & berry)	25 mg
Ginkgo biloba extract (24% ginkgoheterosides & 6% terpene lactones) (leaf)	25 mg
Rhodiola rosea (4% rosavins) (root)	25 mg
Vinpocetine	500 mcg
Huperzine A (as Chinese club moss)	250 mcg

Other ingredients: Vegetarian capsules

Contains No: wheat, dairy, corn or preservatives. No fillers, binders, or flowing agents.

Patients: Consult with your healthcare professional for proper dosage and use of this formula.

For more information about this and other Condition formulas®, please visit our website at:

www.mpn8.com



Portland, OR 97225

This formula is designed to be safely used with Ultra High Formula.

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