

# Amino Acid Brain Boosters

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With all of the extensive research on brain chemistry and function boomers can now avoid age-related cognitive impairment through nutritional support. Without the needed nutritional support cognitive processes such as learning, thinking and remembering can decline during the aging process or can be impacted by degenerative disease.

Stress, anxiety, depression and chronic pain are major problems to proper brain function. The brain is the busiest – yet most undernourished organ in the body. The brain is the master controller, the programmer for every movement, mood, breath, heartbeat, thought and even body temperature and hormone balance. Our brain uses twenty percent of the body's total energy supply, so energy must be supplied on a constant basis in the form of nutrition and nutrients. Oxygen and glucose are in constant demand as fuel by the brain. It uses 25 percent of the body's total oxygen intake. This is carried to the brain by the blood at a rate of 1½ pints per minute. Oxygen and glucose come first, fat, amino acids, vitamins and minerals. Research has demonstrated that poor nutrition at any time in our life can permanently alter brain development. Your state of nutrition is the state of your brain's health and functioning. How your brain functions will depend on how you nourish your mind and body – especially in today's stressful world. The quality of brain function is dependent on neurotransmitters, the chemical language of the brain. Neurotransmitters carry impulses from one neuron to another as from one cell to another, such as a muscle cell. Neurotransmitters can either be inhibitory or excitatory. The balance is what determines if motor neurons fire or not. If there is major deficiency caused by stress, anxiety, depression or chronic pain, irregular firing can occur. If this happens the brain gets mixed messages and cause you to display maladaptive behavior in the form of mood swings, anxiety and panic attacks.

Since 1975 over fifty neurotransmitters have been identified, but the communication conducted between brain cells use only about ten major neurotransmitters. The best known neurotransmitters are serotonin, epinephrine and acetylcholine. Serotonin comes from the precursor amino acid tryptophan or 5HTP. Epinephrine is synthesized from the amino acid phenylalanine or tyrosine. Acetylcholine is metabolized for the complex substance choline.

The following nutrients are important for proper brain function: **SBNC (Super Balanced Neurotransmitter Complex)** is needed to maintain a balance of amino acids in the brain. SBNC contains glutamine, GABA, taurine, phenylalanine, glycine, arginine, methionine, valine, lysine, leucine, alanine, isoleucine and histidine. B6 is included as an activating agent. This formula is appropriate for both children and adults. Two to four capsules taken each morning will provide needed neurotransmitters to improve memory and concentration and fight stress exhaustion.

Dr. Roger Williams, a premier researcher at the University of Texas, established glutamine as the memory and concentration amino acid. Glutamine is found in the nerves of the hippocampus, the memory center of the brain. Glutamine is also in the cranial nerves and in numerous receptors throughout the brain and body. Glutamine is the third most abundant amino acid in the blood and brain. It helps the brain dispose of waste ammonia, a protein

breakdown by product. Glutamine provides a major alternative fuel source for the brain with low blood sugar levels. Dose requirements for Glutamine Powder is one scoop which equals 1,000 milligrams twice daily – or Glutamine capsules, 500 milligrams, two capsules two or three times daily. Glutamine is excellent for children with A.D.D. and A.D.H.D.

Ginkgo Biloba is a brain booster herb that has an excellent track record for enhancing memory and concentration. Ginkgo increases blood flow to the head and improves mental functioning and the ability to focus for longer periods of time. Senior citizens report excellent results combining ginkgo and glutamine. Suggested dose is one ginkgo, 60 milligrams twice daily and 1,000 milligrams of glutamine twice daily.

From the mountains of China a herb known as club moss or Huperzine Serrata. This herb has been used for centuries to improve memory, focus and concentration and to help alleviate memory problems among the elderly. Research data indicates an estimated 100,000 people have been successfully treated and that huperzine is safe and effective. This information was reported in the *Journal of the American Medical Association*. Huperzine, a natural, potent and selective cholinesterase inhibitor has proven superior to other acetylcholinesterase inhibitors. Scientific research has demonstrated multiple therapeutic benefits in the following areas: learning and memory retention, improve focus and concentration, treatment of cognitive and memory impairment and improved nerve transmission to muscles. Huperzine A has been very effective for those suffering from Alzheimer's disease. Alzheimer's patients go through a progressive loss of neuron groups that inhibit communication in the brain and destruction of the cerebral cortex, the outer tissue of the brain. Suggested dose of Huperzine is two tablets daily. This herb is not recommended for pregnant or lactating women or for people with pulmonary problems or congestive heart failure.

A major characteristic of Alzheimer's and progressive loss of mental cognitive function is oxidative stress that increases the rate at which the disease progresses. Oxidative stress results from free radical damage. Brain cells are very susceptible to oxidative stress. To protect the brain from oxidative stress antioxidants are a must on a daily basis. An excellent choice is Deluxe Scavengers. They contain CoQ10, beta carotene, vitamin C, selenium, glutathione, NAC and B6. The recommended adult dose is three capsules daily. To provide the body and brain with a complete super multivitamin use one Total Vite daily. TotalVite contains everything needed for better brain function. TotalVite was researched and developed by the Pain & Stress Center.

Minerals are vital to brain function and magnesium is a major co-factor for all amino acids as well as insuring smooth muscle function. You have 657 muscles in your body that requires magnesium every second of every day. The best source of magnesium is Mag Link, which is magnesium chloride, the same form of magnesium that is naturally occurring in your cells. Recommended dose is one to two Mag Link two to three times daily, depending on your weight and stress level.

Phosphatidylserine (PS) is the nutrient that can revitalize memory, learning, concentration or even vocabulary skills as these cognitive functions decline with age. PS is extremely well

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documented – it's been researched in more than 60 human clinical studies over a period of more than 20 years, in both North America and Europe. Seventeen double blind studies, controlled clinical trials prove beyond doubt its considerable worth as a dietary supplement. These consistently positive clinical findings, backed up by more than 2,800 scientific research papers, prove that PS safely and effectively support memory, learning, concentration, word recall and a wide range of other cognitive brain functions.

Besides benefiting cognition, PS benefits other brain activities, like coping with stress, fighting depression and maintaining daily hormone rhythms. In young, healthy men it lowered the production of stress hormones linked to strenuous exercise and eased stress-related mood symptoms in the elderly.

All our brain cells are enriched in Phosphatidylserine, which helps them produce and release the natural chemical transmitters that make the brain work. But while drugs can be used to raise or lower the levels of single chemical transmitters, PS influences many major transmitter systems to produce an overall harmonizing influence on the brain.

Phosphatidylserine also helps the brain process energy. The brain requires a lot of energy to carry out its functions. The vast majority of the cell energy functions are carried out by mitochondria membranes, which are the energy powerhouses of the nerve cells. PS gets into these membranes, alongside CoQ10 and vitamin E, improving energy efficiency.

For those who require all of their vitamins, minerals and amino acids in one complex, Brain Link, a complete neurotransmitter complex that supplies the body and brain with all of the needed nutrients. Brain Link is excellent for children or adults and can be mixed with any fruit juice. Brain Link is excellent for those who have absorption problems and require a faster breakdown of nutrients. Recommended dose is one to three scoops once or twice daily.

Pregnenolone is biochemically, the mother hormone made directly from cholesterol within the mitochondria. This super hormone is a potent memory enhancer, improves concentration and fights mental fatigue. Pregnenolone is one key to keeping your brain functioning at peak capacity even into your 80's. Some scientists believe it is the most potent memory enhancer of all time. Pregnenolone is produced in the brain and in the adrenal cortex, the gland that sits above the kidneys. Pregnenolone production declines with age. By the time you reach 75 you are producing 60% less Pregnenolone than you did in your 30's. Super hormones like Pregnenolone are similar to neurotransmitters. They are located in the brain and have a profound impact on mental function. Pregnenolone works with the amino acid GABA to enhance brain function. Clinical studies have demonstrated those

with low levels of Pregnenolone have clinical depression as well as memory and concentration problems. Recommended dose will depend on your age, but Pregnenolone comes in 25 and 50 milligram capsules.

The brain is compromised of 60 percent structural fat that governs nerve cell function. The nerve cells are extremely rich in omega 3 fatty acids. Deficiencies in essential fatty acids (EFA's) impair mind, mood, memory and behavior. Essential fatty acids must be taken by both children and adults on a daily basis.

Docosahexaenoic Acid (DHA) is the building block of the brain. DHA is an omega 3 fatty acid. It is the primary building block of the brain and eyes. The brain itself is made up of 60% fat and DHA is the most abundant in the brain and the retina. DHA is essential for children and adult brain development. The best source is Neuromins DHA. The suggested dose is one morning and afternoon.

The brain is a super computer – but a computer that must have constant nourishment to continue to produce the data we need from childhood to our golden years. Remember, your state of health depends on the state of your nutrition.

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