

Brain Health: Mood and Emotional Disorders

Emotional balance is modulated by many physical factors including hormones, neurotransmitters, blood sugar, and more. In addition to addressing lifestyle issues that affect mood (stress, diet, exercise), herbs and nutrients can assist in balancing mood. Depression and anxiety can play a major role in the health, or lack thereof, of the aging population. Depressive disorders are getting more and more common among the elderly. Depression and cognitive health impairments are intricately tied together in a vicious cycle, with one affecting the other. Lifestyle factors such as diet, exercise, living situations (physical environment), psychological counseling, and stress management must always be addressed first or in conjunction with taking herbal or nutritional supplements when we consider ways in which to enhance cognitive health.



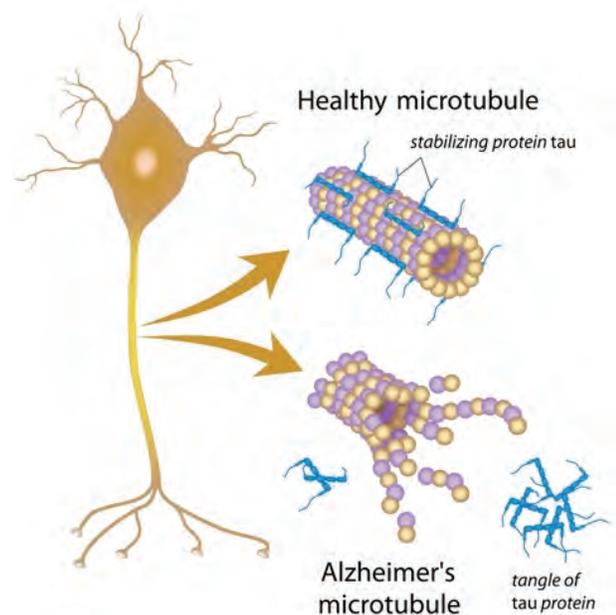
Aging and the Brain

Neurodegenerative diseases are more common as we age. These are diseases that compromise the function of the brain and nervous system. Neurodegenerative diseases can include Alzheimer's disease and other dementias, cerebrovascular disease (stroke), Parkinson's disease, ALS (a.k.a. Lou Gerhig's disease), and more. Age related cognitive decline (ARCD) is another brain aging process. In this newsletter, we will review some of the common neurodegenerative diseases associated with aging and discuss some helpful nutritional supplements.

Alzheimer's Disease

This is a progressive, terminal disease, most often seen in people over age 65. The primary early symptom of AD is trouble remembering recent events. More advanced symptoms include confusion, irritability, aggression, mood swings, long term memory loss, difficulty with language, and the desire to withdraw from family and society.

The pathology, or physical disease process, behind AD is complex and not entirely understood. Plaques and neurofibrillary tangles in the brain are thought to cause the symptoms that we associate with this disorder. The cause of Alzheimer's disease remains unclear. One theory holds that amyloid beta (a protein) deposits, or amyloid related mechanisms cause pruning of neuronal connections in the brain. There also appears to be a genetic predisposition in 1%-5% of cases. Other factors that may play a role include heavy metals, myelin breakdown, oxidative stress, inflammation, insulin resistance and diabetes.



Making lifestyle changes and using diet and supplements to reduce inflammation, reduce oxidative stress, manage blood sugar levels wisely, and encourage active and innovative use of our cognitive abilities are the mainstay of preventing AD in our aging population. Cardiovascular risk factors are associated with a higher risk of AD onset. These factors include high cholesterol, high blood pressure, diabetes, and smoking tobacco.

High cholesterol, blood pressure, and blood sugar are all conditions which are dramatically influenced by dietary and exercise habits. Furthermore, staying physically and mentally active may prevent AD. Individuals who engage in higher levels of non-occupational activities like gardening, exercise, playing a musical instrument, and playing board games were less likely to develop AD than their less active counterparts (Friedland, 2000).

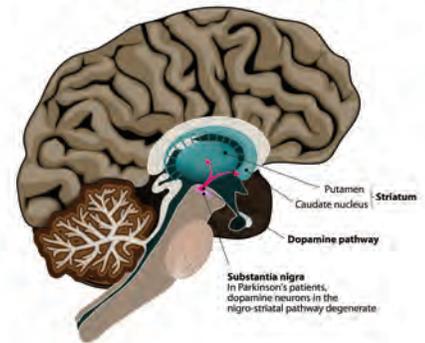
Some evidence points to eating a Mediterranean diet to reduce the risk of and slow the course of AD (Solfrizzi, 2008). One study showed that light to moderate alcohol use, especially red wine, was associated with reduced risk of AD (Panza, 2009). Diets high in fish are associated with a decreased risk of Alzheimer's disease while those diets that are high in fat & calories are associated with increased risk of Alzheimer's disease (Grant, 1997, Smith 1997, Kalmijn 1997). Please refer to other Nutritional Frontiers handouts and newsletters for guidance on the Mediterranean diet, diets to reduce inflammation, diets geared for diabetes, and diets to improve cardiovascular disease.

Parkinson's

Parkinson's involves the malfunction and death of vital nerve cells in the brain, called neurons. Parkinson's primarily affects neurons in an area of the brain called the substantia nigra. Some of these dying neurons produce dopamine, a chemical that sends messages to the part of the brain that controls movement and coordination. As PD progresses, the amount of dopamine produced in the brain decreases, leaving a person unable to control movement normally. The specific group of symptoms that an individual experiences varies from person to person. Primary motor signs of Parkinson's disease include the following.

- Tremor of the hands, arms, legs, jaw and face.
- Bradykinesia or slowness of movement.
- Rigidity or stiffness of the limbs and trunk.
- Postural instability or impaired balance and coordination.

PARKINSON'S DISEASE



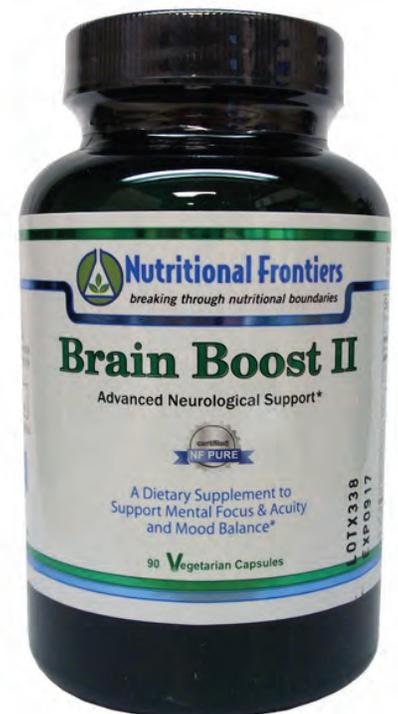
Brain Boost II:

Designed to enhance memory, cognitive function, mental alertness, and mood.

Folate is included as Quatrefolic™ 5-methyltetrahydrofolate, the preferred form of folic acid due to its high absorbability. B vitamin and folate is necessary for cell growth and DNA synthesis. Some research shows an association between Alzheimer's disease and deficiencies of vitamin B12 and folate (Clarke, 1998. Snowdon, 2000). In people with high homocysteine, folate can reduce age-related cognitive decline.

B12 is included as methylcobalamin, the preferred form of B12 due to its high absorbability. This vitamin is necessary for normal nerve cell activity. B12 deficiency is associated with depression, and cognitive impairment. Unfortunately B12 status tends to decrease with age as well as with certain dietary choices, medications, and intestinal disorders.

Phosphatidylcholine is a major component of cell membranes that is involved in cell-signaling. Also called lecithin, this phospholipid provides choline for proper nerve & brain function and is used in the manufacture of acetylcholine. Research has shown its benefits in preventing neural tube birth defects, homocysteine (therefore helping cardiovascular health), and it may help reduce Alzheimer's symptoms and high cholesterol. Some practitioners speculate that lecithin may help slow the aging process.



Huperzine A is derived from a Chinese moss called Huperzia. Huperzine A inhibits an enzyme called acetylcholinesterase. This enzyme degrades the neurotransmitter acetylcholine (ACh). Efficient ACh transmission serves to support memory, cognition, and attention, so inhibition of the enzyme that degrades ACh can help improve these mental processes. Huperzine A has been shown in studies to improve memory and cognitive function in some senior populations (Wang, 1999. Xu, 1995. Desilets, 2009.).

Phosphatidylserine is proven by research studies to improve mood, memory, and cognition in elderly populations (Age-related cognitive decline). Also it can improve athletic performance and endurance. Phosphatidylserine has some benefits in promoting well-being & mental function in Alzheimer's patients. It may reduce the severity of depression by affecting neurotransmitter levels and may improve mood and mental function in people with Parkinson's disease.

Vinpocetine is a substance derived from periwinkle leaves (Vinca minor). Vinpocetine has been shown in research studies to improve dementia symptoms in patients with various brain diseases (Hindmarch, 1991. Balestreri, 1987. Peruzzi, 1986. Manconi, 1986.).

Acetyl-L-Carnitine is an amino acid that supports nerve function & neurotransmitter production. It may protect the brain from ischemia, according to animal studies. Carnitine is necessary for normal neuron and brain function, memory, mood, alertness, attention span and problem solving. Carnitine is involved in long chain fatty acid metabolism and transport to provide cellular energy. High doses may delay progression, improve memory, and enhance overall performance in people with AD (Pettegrew, 1995. Salvioli, 1994. Sano, 1992).

Ginkgo biloba leaves are antioxidant and promote blood flow to the cerebrum. Ginkgo may be useful for people with mild cognitive impairment, mild age-related memory loss, depression, tinnitus, headaches, and more. In Europe, ginkgo is approved as a treatment for early-stage Alzheimer's disease to improve quality of life & slow disease progression. (LeBars, 1997. Hofferberth, 1994. Maurer, 1997).

Panax ginseng is an adrenal adaptogen with many functions, such as enhancing physical and intellectual performance, supporting immune function, lowering blood sugar, & improving libido and erectile dysfunction.

Bacopa is an herb used in the Ayurvedic tradition for centuries. Traditionally, bacopa has been used to promote brain function such as learning, memory, and concentration. Bacopa is also thought to enhance stress management.



Neuro Max

A liquid vitamin supplement designed for youngsters struggling with behavioral problems & social interactions. This formula also may support immune system function, stress management, and mental clarity and can be used by people of all ages. Neuro Max contains activated B6 (pyridoxal-5-phosphate), folic acid, vitamin B12, magnesium, zinc, DMG HCl, and Betaine.



CoCoFlax

CoCoFlax vegetarian softgels provide coconut oil and flaxseed oil to supply essential fatty acids to support joint, cardiovascular, immune, and neurological health. Essential fatty acids include the anti-inflammatory omega 3 & 6 fatty acids.



Mood Lift

This supplement is used by people with depression, sleep disturbances, neurological disorders. It contains 5-HTP, an amino acid that is an intermediate step in the conversion of tryptophan to serotonin. The 5-HTP in Mood Lift is extracted from the African plant Griffonia simplicifolia. Serotonin is a neurotransmitter that helps regulate mood, behavior, sleep, appetite, and activity levels. Mood Lift also contains ginkgo, vitamins B3, B6, and magnesium.



Neuro Tincture

An herbal tincture designed to support nervous system function and enhance cognition & mental clarity, Neuro Tincture can also promote relaxation and helps the body adapt to stress. Contains ginkgo, gotu kola, eleutherococcus, schisandra, rosemary, skullcap, & prickly ash bark.



Power Q 600

Coenzyme Q10 is beneficial for cardiovascular health, and can reduce blood pressure thereby reducing risk of stroke. CoQ10 may also help improve insulin resistance and lower high blood sugar (Digiesi, 1990. Singh, 1999). High doses of CoQ10 may improve early Parkinson's disease (Shults, 2002) as well as migraine headaches (Rozen, 2002. Sandor, 2005.).

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