

## **Nutrition, Memory and Dementia: How Various Nutrients Can Preserve Memory As You Age**

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As we age a number of factors predispose us to a decline in memory capacity and the development of more severe forms of cognitive decline, such as dementia and Alzheimer's disease. One of these factors is the lifetime accumulation of free radical damage to brain cells induced by the brain's high use of oxygen. The same way that oxygen in the air causes apples to rot or metal to rust, oxygen in the body damages our tissues in a similar fashion. The brain uses about 20% of the body's oxygen supply at any given moment to help brain cells metabolize blood sugar into energy, which enables brain cells to keep functioning. But the side effect is a build up of oxygen free radicals, which can damage brain cells and impair their function over time. Free radical events are a known factor in Alzheimer's disease and other forms of cognitive decline.

Of importance is the fact that some studies show that individuals who supplement with antioxidants (like vitamin C and vitamin E) have a lower incidence of Alzheimer's disease as they age. Thus, it may be wise to ensure that you get 1,000mg of vitamin C and 400IU of vitamin E per day from a high potency multiple vitamin, which should also contain a B-50 complex – as a number of B-vitamins are required to synthesize various of brain chemicals (neurotransmitters), which are essential to alertness, concentration and cognition in general.

A second way in which we are predisposed to memory loss as we age is the decline in synthesis of the memory chemical (neurotransmitter) acetylcholine, which really kicks in after age 54. As we age the brain is less able to make this important memory

chemical, setting us up for memory loss and many of the manifestations of dementia and Alzheimer's disease. The good news is that there are several natural agents that have been shown in clinical studies to help the aging brain boost its production of acetylcholine, thereby helping to combat this age-related decline in memory

The most important natural agents include:

- CDP-Choline (cytidine 5-diphosphocholine or citidinediphosphocholine or citicholine)
- Phosphatidylserine
- Bocopa Monnieri
- Huperzine A

**CDP-Choline** is a normal component of the skin around brain cells (a phospholipid in the nerve cell membrane), which is important for transmission of nerve impulses from one nerve to the next. It is also vital to the formation of the memory chemical acetylcholine. Unfortunately, the aging brain is less able to synthesize the CDP-Choline it requires, but studies have shown that supplementation with CDP-Choline can re-constitute brain levels of CDP-Choline, boosting levels of several important brain neurotransmitters and improving nerve conduction ability. These results translate into enhanced mental acuity and improvement in a number of disorders involving memory loss and cognitive decline.

**Phosphatidylserine** – like CDP-Choline, Phosphatidylserine is a natural component of the nerve cell membrane, and it too, is a victim of age-related decline in synthesis. Studies show that supplementation with phosphatidylserine can also elevate brain

levels of acetylcholine, and has been shown to improve memory and cognition in clinical trials with afflicted individuals.

**Bacopa Monnieri** - the leaf of Bacopa, or water hyssop, has been used in the Indian medical system of Ayurveda since the 6<sup>th</sup> century A.D. to help improve mental performance. Its active ingredients (bacosides A and B) have been shown to enhance nerve transmission and are potent antioxidants, which have been shown to protect brain cells from free radicals and other toxic substances. Human studies indicate that Bacopa Monnieri can preserve memory function and has been used in the treatment of various conditions involving memory loss.

**Huperzine A** - this natural substance was initially discovered within a club moss that grows in Asia, which has been used traditionally to aid memory loss problems. Since being isolated, Huperzine A is now synthesized for use in natural health products and has shown a remarkable ability to support brain levels of acetylcholine (the memory chemical). It does so by partially inhibiting the enzyme that breaks down acetylcholine (acetylcholinesterase), which results in higher acetylcholine brain levels. Its positive effects on memory and brain function have been shown in a number of human clinical trials.

### **After Age 54 It's Time To Ingest A Daily Memory Support Supplement**

Due to the fact that the aging process is associated with decreased synthesis of the memory chemical acetylcholine, as well as important phospholipids (CDP-Choline, Phosphatidylserine), which are required for optimal nerve impulse transmission, I suggest that you begin ingesting a supplement at age 55 that can help combat memory loss and other related problems. Key ingredients in a memory support supplement include CDP-Choline, Phosphatidylserine, Bacopa Monnieri and Huperzine A. All of

these have been shown to be safe, effective natural ingredients, when taken at appropriate dosages, and unlike Ginkgo Biloba and Vinpocetine, do not increase risk for bleeding disorders. The only caveat is that these supplements can not be used in conjunction with drugs commonly used to treat Alzheimer's disease.

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