

Update Exclusive

May 22, 2009

Higher vitamin D levels associated with speedier brain processing

In an article published on May 21, 2009 online in the *Journal of Neurology, Neurosurgery and Psychiatry*, European researchers report that men with higher vitamin D levels performed better on a test of attention and speed of information processing than those with lower levels of the vitamin.

Dr David M. Lee of the University of Manchester's School of Translational Medicine and his associates administered 3 tests of cognitive function to 3,369 men aged 40 to 79 from 8 centers participating in the European Male Aging Study (EMAS). Fasting blood samples collected from the subjects were analyzed for serum 25-hydroxyvitamin D levels.

Men whose vitamin D levels were higher were found to perform better on all three tests, although the Digit Symbol Substitution test, which measures psychomotor speed and visual scanning, was the only test whose scores were associated with vitamin D levels after adjustment for several factors. Further analysis revealed that higher test scores were particularly associated with increased vitamin D levels in older participants.

Although the authors write that the mechanisms of vitamin D in cerebral functions are unknown, they note that vitamin D has been shown to increase choline acetyltransferase activity in rat brains and that there is also evidence that the vitamin provides a neuroprotective effect. Furthermore, parathyroid hormone and calcium levels, which are affected by vitamin D, could be involved in cognitive function. Additionally, low serum vitamin D levels have been associated with a greater risk of depression, and higher levels of vitamin D were found to be associated with lower depression scores in the current study.

"Previous studies exploring the relationship between vitamin D and cognitive performance in adults have produced inconsistent findings but we observed a significant, independent association between slower information processing speed and lower levels of vitamin D," stated Dr Lee. "The main strengths of our study are that it is based on a large population sample and took into account potential interfering factors, such as depression, season and levels of physical activity.

"Interestingly, the association between increased vitamin D and faster information processing was more significant in men aged over 60 years, although the biological reasons for this remain unclear," he added. "The positive effects vitamin D appears to have on the brain need to be explored further but certainly raise questions about its potential benefit for minimizing age-related declines in cognitive performance. "

"If cognitive function can be improved by a simple intervention such as vitamin D supplementation, this would have potentially important implications for population health," the authors conclude. "In light of our findings, and the fact that vitamin D inadequacy is common among adults, further prospective studies are warranted to determine whether vitamin D supplementation could aid in minimizing aging-related declines in specific cognitive domains."

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The best strategy for treating mild cognitive impairment is to avoid it in the first place. This means getting plenty of exercise and good sleep, eating a healthy diet, keeping body weight down, avoiding diabetes, and taking the right nutritional supplements before you experience any signs of cognitive decline.

Life Extension Highlight**Annual Blood Test Super Sale on now!**

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The banner features the text "ANNUAL Blood Test SUPER SALE" in a stylized font, with "Blood Test" in large red letters. Below it, the dates "APRIL 1 - JUNE 1, 2009" are written in blue. To the right of the text is a red test tube with a gold seal that says "EXCLUSIVE".

In recent years, inflammation has been implicated in the gradual loss of mental function that is known as mild cognitive impairment. Although researchers haven't yet examined anti-inflammatories such as ginger and rosemary in the context of mild cognitive impairment, we believe natural nutrients may play a role in cognitive health.

The following supplements have also been shown to boost brain function directly:

- Cognitex—This special formulation was created by the Life Extension Foundation to supply a mix of nutrients that support healthy brain function. The recommended amount is three capsules.
- Ginkgo biloba—120 mg/day (200 mg/day of Panax ginseng may amplify ginkgo's effect)
- Acetyl-L-carnitine and acetyl-L-carnitine arginate—1500 to 3000 mg early in the day
- Huperzine A—50 to 100 mcg daily
- Vitamin B6—100 to 750 mg daily (Be sure to take a complete B complex each day when taking daily doses of vitamin B6 in excess of 200 mg.)
- Methylcobalamin (B12)—1000 to 5000 microgram (mcg) daily sublingually
- Folic acid—800 mcg daily orally; should be taken with vitamin B12
- Vitamin C—at least 2000 mg daily
- Mixed vitamin E—400 International units (IU) daily
- CoQ10—30 to 300 mg daily of a highly absorbable form
- Vinpocetine—15 to 30 mg daily
- Bacopa—As directed, depending on extract strength
- EPA/DHA—700 to 2100 mg EPA and 500 to 1500 mg DHA daily with food

Abdominal weight gain is epidemic in aging men, with low free testosterone being a common culprit. In women, abdominal fat accumulation may be caused by an estrogen imbalance and/or excess free testosterone (the opposite of men). In both sexes, low DHEA hormone can contribute to excess belly fat. By measuring blood levels of hormones involved in fat metabolism, one can restore their hormonal profile to youthful ranges that existed when they were normal body weight.

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If you have questions or comments concerning this issue or past issues of *Life Extension Update*, send them to ddye@lifeextension.com or call 954 202 7716.

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