



communicating Food for Health

Can B Vitamins Reduce Senility?

By James J. Kenney, PhD,
FACN

Alzheimer's Disease (AD) is a growing health problem in the United States and many other countries as the proportion of older people in most populations continues to increase. The aging of Baby Boomers has resulted in a rapidly rising number of Americans with declining cognitive function. Since there is no cure or even any effective treatments for advanced AD there is a growing need for ways to prevent or at least delay the onset of AD and senility. AD and vascular dementia (#1 and #2 causes of senility) both share many of the risk factors associated with the development of stroke. Both AD and vascular dementia are more common in people who are obese, especially if they develop insulin resistance and type 2 DM. Elevated blood pressure, nonHDL-C levels, and inflammatory markers are all also associated with an increased risk of stroke and a

more rapid loss of cognitive function over time.

Moderately elevated levels of serum homocysteine (Hcy) levels are also positively associated with a greater risk of stroke and heart disease and a more rapid decline of cognitive function over time. There is little debate about whether or not lowering nonHDL-C, blood pressure, reducing inflammatory markers, losing excess weight, exercise, and avoiding tobacco can help prevent stroke and likely also substantially cut the risk of senility. However, several well designed large clinical trials using B-vitamin supplements to lower serum Hcy levels all failed to find a significant reduction in either stroke or total CVD events. This was also the case with smaller clinical trials in patients with kidney disease who are at high risk for CVD events and tend to have elevated serum Hcy levels because their kidneys clear it more slowly from the blood. [http://

(continued on next page)

October '16

Professional Member Edition

Research

What is the impact of B vitamins on the cognitive function of the elderly?

Practitioner Ideas

Make a Motivation Kit!

Client and Consumer Education

Handouts: Recipes and Cooking Tips

1. Herb Roasted Chicken
2. Chicken Thigh Stew

This Month's Handouts

1. Healthy Skin: Part One
2. Eating More Fruits and Vegetables
3. Diabetes Breakfast Buffet of Ideas
4. Getting Kids to Move More

Online: Clipart, Calendar, Recipes, PDF Handouts, Articles, This Month, Newsletter Archive

www.ncbi.nlm.nih.gov/pmc/articles/PMC2651913/. This certainly suggests taking B-vitamin supplements (typically folate, pyridoxine, and vitamin B-12) even in those with elevated levels has little hope of cutting stroke and CVD events even though they do lower Hcy levels.

Do B-Vitamin Supplements Slow Loss of Cognitive Function?

Moderately elevated levels of Hcy certainly correlate with both an increased risk of stroke, vascular dementia, and AD. But correlation does not prove causation as demonstrated by the fact that taking B-vitamin supplements to lower serum Hcy levels lowered serum Hcy levels but failed to reduce the risk of CVD events. However, one cannot assume that just because taking B-vitamin supplements to lower serum Hcy levels failed to reduce CVD does not mean these B-vitamins may not help prevent loss of brain function in patients at risk of AD and vascular dementia because they already have mild cognitive decline (MCD). Indeed, it appears that the fortification of more foods with folic acid in the USA has already resulted in some decline in both average serum Hcy levels and the development of AD. [Larson EB, Yaffe K, Langa KM.

New Insights into the Dementia Epidemic. *N Engl J Med.* 2013;369(24):2275-7. PMID 24283198]. Many population studies have observed a significantly greater risk of AD and/or vascular dementia and higher levels of serum Hcy levels. [Seshardi S, et. al. Plasma homocysteine as a risk factor for dementia and Alzheimer's disease. *N Engl J Med* 2002;346:476-83]. However, studies examining the impact of B-vitamin supplements in patients with MCD have so far yielded mixed results. [Wald DS, Kasturirante A, Simmonds M. Effect of folic acid with and without other B-vitamins on cognitive decline. *Am J Med* 2010;123(6):522-7 and Ford AH, Almeida OP. Effect of homocysteine lowering treatment on cognitive function: *J Alzheimers Dis* 2012;29:133-49].

One problem with past studies that used neuropsychological testing to assess changes in cognitive function over time is that such measurement can vary from day to day and depend to some extent on the skill of the testers. So a more accurate and objective measure of brain changes over time may be a more precise way to assess the impact of B-vitamins and Hcy levels on brain changes linked to AD pro-

gression. Dr. Douaud and associates examined subjects from a randomized controlled clinical trial that measured MCI with neuropsychological testing but also used brain MRIs to look for physical changes in the brain associated with the development of AD. After two years they observed a significantly smaller loss of brain tissue in areas of the brain linked to the progression of AD in those taking either a B-vitamin supplement containing folic acid (800mcg), pyridoxine (20mg), and vitamin B-12 (500mcg) or a look-a-like placebo. This slow down in brain atrophy in the B-vitamin group was particularly significant in those whose initial serum Hcy levels were above 11 micromoles/L. In the placebo group the authors noted that those with higher serum Hcy levels saw greater declines in brain grey matter indicative of AD. And the slowed loss of brain grey matter occurred in the same parts of the brain that are most highly correlated with declining cognitive function over time. It is important to note that the B-vitamin supplements had little impact in subjects who already had low serum Hcy levels. People with...

(Continued at <https://foodandhealth.com/can-b-vitamins-reduce-senility/>).

Make a Motivation Kit:

As your clients pursue health, weight, and fitness goals, sometimes their motivation can wax and wane. When motivation is high, it's a good idea to help them make a personal motivation kit that can help inspire them when the going gets tough.

This kit can help your clients to stay on track throughout the process of setting and reaching their goals.

Here are a few ideas for items that may remind your clients of the importance of their efforts. Feel free to take the tips below as inspiration and customize each kit as you see fit...

- A magazine article about people in the National Weight Control Registry. You can find a sample in People magazine — look for the issue about losing

half your weight. You can also access articles and tips directly from the National Weight Control Registry itself at <http://www.n-wcr.ws>.

- A list of reasons to lose weight, including better blood glucose control, making family proud, maybe taking less medicine for diabetes, blood pressure, and cholesterol, etc.
- Wedding picture
- Photos of children and/or grandchildren
- Progress report including milestones like “I can cross my legs,” “I sleep better,” “peo-

ple tell me I look great,” “exercise is more fun,” etc

- Motivational saying such as “We can do anything we want as long as we stick to it long enough” (Helen Keller) or “Each morning brings a new chance to do something right.”
- Lab reports
- Travel photos

By Jill Weisenberger, MS, RDN, CDE, FAND, CHWC



Communicating Food for Health

By Food and Health Communications, Inc.
ISSN 1070-1613 © 2013. All rights reserved.
P.O. Box 271108, Louisville, CO 80027
Phone: 800-462-2352 Fax: 800-433-7435
<http://communicatingfoodforhealth.com>

Executive Editor

Judy Doherty, PC II

Contributing Writers

James J. Kenney, PhD, FACN
Jill Weisenberger, MS, RD, CDE
Victoria Shanta Retelny, RD, LD
Lynn Grieger, RD, CDE, CPT
Stephanie Ronco

Editorial Advisory Board

Alice Henneman, MS, RD
Barbara Hart, MS, RD, LDN
Cheryle Syracuse, MS
James J. Kenney, PhD, FACN
Jill Eisenberg, RDH, MS, RD, CDN
Karla Logston, RN, BS, CDE, CHC
Linda Rankin, PhD, RD, LD, FADA
Stephanie Correnti, BS, RD

Join Communicating Food for Health

1 year, 12 issues of *Communicating Food for Health eNewsletter + eHandouts + online member library for thousands of articles, recipes, handouts, newsletter archive + license to reproduce for one site + store discount.*

- Consultant, one person: 1 year: \$89 • 2 years: \$145
- Corporate, 6 people: 1 year: \$349 • 2 years: \$550

Name: _____

Title/Company: _____

Address: _____

City/State/Zip: _____

Phone: _____

E-mail: _____

Check enclosed or Charge Visa/MasterCard/AMEX

Card number: _____

Expiration date: _____

Name on card: _____

Mail to Food and Health Communications, Inc.

P.O. Box 271108, Louisville, CO 80027;

Phone: 800-462-2352; Fax: 800-433-7435; orders@foodand-health.com

The content of Communicating Food for Health is not intended to provide personal medical advice; this should be obtained from a qualified health professional.