

Alzheimer's Disease, Cognitive Decline and Nutrition Newsletter Issue No 4

Authored by the Department of Internal Medicine and Clinical Gerontology, Alzheimer's Disease Center (Professor Bruno Vellas, MD), University of Toulouse, France Sponsored by the Novartis Foundation for Gerontology and the Web-based Health Education Foundation, in collaboration with the International Academy on Nutrition and Aging

Among women, greater knee height and arm span were associated with lower risks of dementia.

The objective of this recent study by Huang et al, Boston, Tufts University, (Neurology. 2008 May 6;70:1818-26) is to determine if anthropometric measures, as markers of early life environment, are associated with risk of dementia, Alzheimer disease (AD), and vascular dementia (VaD). A total of 2,798 subjects were followed as part of the Cardiovascular Health Cognition Study for an average of 5.4 years; 480 developed dementia. Knee height was measured 3 years prior to and arm span 4 years after the study's baseline. Among women, greater knee height and arm span were associated with lower risks of dementia and AD. Women in the lowest quartile of arm span had approximately 1.5 times greater risk of dementia (HR 1.45; 95% CI 1.03-2.05) and AD (HR 1.70; 95% CI 1.10-2.62) than other women. Among men, only arm span was associated with lower risks of dementia (HR per 1-inch increase 0.94; 95% CI 0.89-1.00) and AD (HR per 1-inch increase 0.92; 95% CI 0.84-1.00). These findings with knee height and arm span are consistent with previous reports and suggest early life environment may play an important role in the determination of future dementia risk.

Moderately severe Alzheimer's patients had much lower plasma levels of two major carotenoids compared to mild Alzheimer.

Carotenoids are fat-soluble antioxidants that may protect polyunsaturated fatty acids, such as n-3 fatty acids from oxidation, and are potentially important for Alzheimer's disease (AD) prevention and treatment. Fasting plasma carotenoids were measured in 36 AD subjects and 10 control subjects by HPLC in a recent work published by Wang et al, University of Portland, (J Alzheimers Dis. 2008 Feb;13(1):31-8). Moderately severe AD patients (MMSE=16-19) had much lower plasma levels of two major carotenoids: lutein and beta-carotene, compared to mild AD patients (MMSE=24-27) or controls. A lower MMSE score was associated with lower lutein, beta-carotene and RBC DHA levels, and a higher LDL-cholesterol level. Lutein, beta-carotene and beta-cryptoxanthin were positively correlated with RBC DHA in AD patients. The association between higher carotenoids levels and DHA and higher MMSE scores, supports a protective role of both types of nutrients in AD. These findings suggest targeting multiple specific nutrients, lutein, beta-carotene, and DHA in strategies to slow the rate of cognitive decline. However further studies must take into consideration the patients global nutritional status. It is well know that patients with severe dementia are more at risk for malnutrition and poor nutritional intakes. Related article: <http://www.healthandage.com> <http://www.healthandage.com/html/min/iananda/>

Weight gain and high Waist Circumference increased risks of dementia.

While dementia affects 6-10% of persons 65 years or older, industrialized countries have witnessed an alarming rise in obesity. However, obesity's influence on dementia remains poorly understood. Beydoun et al, Johns Hopkins, conducted a systematic review and meta-analysis (Obes Rev. 2008 May;9(3):204-18). PUBMED search (1995-2007) resulted in 10 relevant prospective cohort studies of older adults (40-80 years at baseline) with end points being dementia and predictors including adiposity measures, such as body mass index (BMI) and waist circumference (WC). There was a significant U-shaped association between BMI and dementia ($P = 0.034$), with dementia risk increased for obesity and underweight. Pooled odds ratios (OR) and 95% confidence intervals (CI) for underweight, overweight and obesity compared with normal weight in relation to incident dementia were: 1.36 (1.07, 1.73), 0.88 (0.60, 1.27) and 1.42 (0.93, 2.18) respectively. Pooled ORs and 95% CI for obesity and incident Alzheimer's disease (AD) and vascular dementia were 1.80 (1.00, 3.29) vs. 1.73 (0.47, 6.31) and were stronger in studies with long follow-up (>10 years) and young baseline age (<60 years). Weight gain and high WC or skin-fold thickness increased risks of dementia in all included studies. The meta-analysis shows a moderate association between obesity and the risks for dementia and AD. Future studies are needed to understand optimal weight and biological mechanisms.

Higher levels of blood glucose were associated with impaired memory performance.

Previous research investigating the impact of glucose ingestion and/or improvements in glucose regulation has found selective cognitive facilitation on episodic memory tasks in successful ageing and dementia.

The present study conducted by Riby et al, Newcastle, (Eur J Clin Nutr. 2008 Feb 13).aimed to extend this research to mild cognitive impairment (MCI). In a repeated-measures design, 24 older adults with and 24 older adults without MCI performed a battery of memory and attention tasks after 25 g of glucose or a sweetness matched placebo. In addition, to assess the impact of individual differences in glucose regulation, blood glucose measurements were taken throughout the testing session. Consistent with previous research, cognitive facilitation was observed for episodic memory tasks only in both successful ageing and MCI. Older adults with MCI had a similar glucose regulatory response as controls but their fasting levels were elevated. Notably, higher levels of blood glucose were associated with impaired memory performance in both the glucose and placebo conditions. Importantly, both blood glucose and memory performance indices were significant predictors of MCI status. Related Articles: <http://www.healthandage.com/html/min/iananda/>

IANA Symposium on Nutrition, Exercise, Alzheimer & Sarcopenia Trials, Hyatt Regency Tamaya, Santa Ana Pueblo, New Mexico USA , August 1 & 2, 2008.
IANA Symposium on Alzheimer's Preventive Approaches: Physical Exercise, Cognitive Exercise, Nutrition, Vascular risk factors; and on: Frailty & Sarcopenia Clinical Trials, New Therapies (Albuquerque, NM, USA, Hyatt Regency Tamaya Resort, August 1&2, 2008 ; www.healthandage.com/html/min/iananda, www.serdifr.com/ABQ.htm Santa Ana Pueblo, Hyatt Regency Tamaya Resort. The aim of the meeting is to bring together the 200 experts in the field. For more information on speakers and topics go to: www.healthandage.com/html/min/iananda or to www.serdi-fr.com/ABQ.htm Papers presented at the meeting will be published in 2 JNHA special issues on: Sarcopenia: Clinical Trials and on Nutrition, Exercise and Alzheimer Registration contact: CMEWeb@salud.unm.edu Program: www.healthandage.com/html/min/iananda/index.htm www.serdi-fr.com/ABQ.htm Related content: www.healthandage.com/html/min/iananda/index.htm

=====
Department of Internal Medicine and Clinical Gerontology, Alzheimer's Disease Center (Professor Bruno Vellas, MD), University of Toulouse, France
=====
*** Information for Readers***

- Questions & Feedbacks
For questions about Alzheimer's Disease, Cognitive Decline or Nutrition and Aging, click here: <http://www.healthandage.com/Home/gm=25!fa=1!gid=BVE>
- Recommend this newsletter to a friend If you'd like to recommend this free e-mail newsletter to your colleagues or friends, click here to send them an invitation to receive it: <http://www.healthandage.com/html/min/iananda/newsletter.htm>

=====
DISCLAIMER: The information in this newsletter is intended only to help you learn more about Alzheimer's Disease, Cognitive Decline, Nutrition and Aging. It does not recommend any specific treatment, and it is not intended to replace the advice of a physician.
=====

Go to: <http://www.healthandage.comaa>

2. FAMILY CAREGIVER ALLIANCE NEWSLETTER: _Caregiving Policy Digest_(Vol. VIII, No. 14, July 9, 2008). <http://archive.constantcontact.com/fs037/1101399948055/archive/1102165098815.html>