

# an Ounce of Prevention

ALZHEIMER'S PREVENTION THROUGH DELAY

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## PREVENTION HIGHLIGHT

### New Year's Resolution: Detect Memory Loss Early

Early detection, accurate diagnosis and treatment of memory disorders are the key to better treatment efficacy and improved quality of life. Just like conditions such as heart disease and diabetes, treatment of most memory disorders is effective only when begun early.

The following article is intended to provide a practical approach to achieving a New Year's resolution of detecting memory disorders early for you as well as for those you love.

#### Memory Screening

Like annual screenings for cancer, cholesterol and other conditions, memory screening should be a part of an individual's plan to stay healthy. It is recommended that individuals who meet any of the following criteria be screened for memory loss:

- All persons over the age of 65.
- Persons with complaints of decline in memory or other cognitive abilities.
- Persons with complaints of greater difficulty performing their most complex tasks.

#### ***How to Get Screened***

The Free Memory Screen available on [www.PreventAD.com](http://www.PreventAD.com) can be used to screen yourself or a loved one. The online questionnaire is anonymous and the results can be printed and shared with a physician. The Memory Screen discriminates between normal aging and early stage Alzheimer's disease or related disorders.

#### **If the result of the Memory Screen is Normal**

A normal result means that it is 94% or more likely that the individual assessed does not have a memory disorder. If there is no reason to suspect impairment, nothing more is required, although it is suggested you continue to be checked annually with the Memory Screen.

#### **If the result of the Memory Screen indicates some memory loss was detected**

Using the Memory Screen, there is a 20% chance that normal aging individuals may be classified as impaired, therefore abnormal results need to be objectively confirmed. We recommend sharing the results of your screen with your primary care physician and requesting more objective assessments. Such assessments include the MCI Screen, developed by Medical Care Corporation and other assessments administered by neuropsychologists.

## **Diabetes Linked to Stroke but Not Alzheimer's Disease**

In a recent study, published in the December 2006 issue of *Neurology*, researchers found that diabetes is associated with cerebral infarction in older patients. However, there is no association between diabetes and Alzheimer's Disease. Cerebral infarction is defined as a stroke caused by interruption or blockage of blood flow to the brain; also called ischemic stroke.

The study conducted by Dr. Zoe Arvanitakis and colleagues from Rush University Medical Center in Chicago, used the autopsy results of 233 older participants in the Religious Order Study. They found approximately one third of the participants had one or more gross chronic infarctions and patients with diabetes were about 2.5 times more likely than others to have cerebral infarction. In contrast, the levels of AD pathology were similar between patients with or without diabetes.

Arvanitakis et al. *Neurology* (2006) 67:1960–1965.

## **Brain Exercise Helps Seniors Live Independently**

A recent study found that brain exercise helps seniors think more clearly and perform everyday tasks needed to live independently. Researchers at the University of Florida spent 5 years following 2,800 healthy seniors ages 73 to 74. The participants were divided into four groups. The “memory group” was trained to remember word lists. The “reasoning group” was trained to logically complete series of letters or numbers. The “speed group” was trained to quickly identify figures on a computer. The control group received no training.

Individuals in the three training groups scored significantly higher in mental tests for up to 5 years after the training. Additionally, the reasoning group saw the least decline in the ability to handle activities of daily living. This study is the first to demonstrate the effects of cognitive training on everyday function.

Willis et al. *JAMA* (2006) 296: 2805–2814.

## **Reduced Heart Rate Variability Associated with Mild Cognitive Impairment**

A recent study found that cardiac autonomic dysfunction is associated with mild cognitive impairment in physically disabled older women, independent of traditional risk factors for cognitive impairment. Participants were enrolled in the Women's Health and Aging Study I, a prospective observational study investigating the progression of physical disability. The subset of 311 women aged 65 or older, were those for whom heart rate variability data was available.

After adjusting for demographic factors such as age, education and race, the prevalence of cognitive impairment was consistently higher in those with heart rate variability than in the rest of the study participants. In particular, reduced high-frequency power, indicative of decreased parasympathetic activity, was associated with 6.7 times greater odds of cognitive impairment. Cognitive impairment was defined by a score of 24 or lower on the Mini Mental Status Exam, a widely used pen and paper test.

Kim et al. *JAGS* (2006) 54: 1751–1757.

## **Rote Learning May Improve Memory in Seniors**

Short and intensive periods of rote learning may improve verbal and episodic memory functions in older adults. However, the improvement in these memory functions, as well as the associated brain changes on magnetic resonance spectroscopy (MRS), does not appear until several weeks after completion of the learning tasks.

The study included 24 adults aged between 55 and 70 years of age. The subjects spent six weeks memorizing a newspaper article or poem of 500 words, followed by 6 weeks of resting period. Cognitive tests were performed before the learning period and after the resting period. Interestingly, no improvements in memory function or brain metabolism were observed after the rote learning period. However, after the resting period, improvements in both verbal and episodic memory were observed along with metabolic changes in the left posterior hippocampus, a key structure for memory functions.

These findings support the belief that the brain is like a muscle that needs to be exercised regularly to maintain or improve cognitive function.

McNulty et al. the Radiological Society of North America Annual Meeting, Chicago, Ill, Nov. 2006.