

Alzheimer's Disease May Be More Difficult to Detect in People Over 80

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A new study led by a researcher with the University of California, San Diego School of Medicine and VA San Diego Healthcare System suggests that Alzheimer's disease (AD) may be more difficult to detect in people over the age of 80 than in those between the ages of 69 and 75. The research is published in the August 10, 2011, online issue of *Neurology*[®], the medical journal of the American Academy of Neurology.

"Our study shows the importance of paying attention to age when reviewing test performance and other markers of Alzheimer's disease," said study author Mark Bondi, PhD, professor in the UCSD Department of Psychiatry and director of the Neuropsychological Assessment Unit at the VA San Diego Healthcare System.

The study involved 105 people with Alzheimer's disease and 125 people who were free of dementia, recruited through the Alzheimer's Disease Neuroimaging Initiative (ADNI) - a landmark research study launched in 2004 by the National Institutes of Health to identify brain and other biological changes associated with memory decline.

Participants were grouped into those between the ages of 60 and 75 and those age 80 years and older. All were given tests that measured language, attention and speed of processing information, executive function, and immediate and delayed ability to recall information. The individuals also underwent brain scans to measure the thickness of the outermost tissue layers in the cerebrum of the brain known to be affected by Alzheimer's disease.

Although the two AD groups had similar levels of overall cognitive impairment and memory loss, researchers found that the pattern of Alzheimer's disease appeared to be less noticeable in people over the age of 80 (very-old) when compared to those between the ages of 69 and 75 (young-old). A set of standard scores was derived using a sample of normally aging participants. Compared to their peer, non-AD groups, fewer abnormalities in executive function, immediate memory and attention/processing speed were observed in the "very old" with Alzheimer's disease than in the young-old AD cohort.

Age-related decline may also make MRI-derived measures of regional brain volumes - an early marker of Alzheimer's disease - less reliable in those over 80. The very-old AD study participants also showed less severe thinning of certain areas of the cortex than the young-old, when compared to their healthy counterparts.

"This is in part because these brain areas normally decrease in thickness due to age, so there are fewer differences between the healthy, very-old brain and the very-old brain with Alzheimer's disease," Bondi said. "As a result, mild cases of Alzheimer's disease in those over age 80 may go undetected."

Bondi added that - since detection is vital to starting treatments that may slow the disease process, helping to preserve memory, independence and quality of life for seniors - it is especially important to realize that unique challenges exist in detecting dementia due to Alzheimer's disease in patients over 80.

Additional contributors to the study include N.H. Stricker, PhD, Y. L. Chang, PhD, C. Fennema-Notestine, PhD, L. Delano-Wood, PhD, D.P. Salmon, PhD, and A.M. Dale, PhD.

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The American Academy of Neurology, an association of more than 24,000 neurologists and neuroscience professionals, is dedicated to promoting the highest quality patient-centered neurologic care. A neurologist is a doctor with specialized training in diagnosing, treating and managing disorders of the brain and nervous system such as Alzheimer's disease, stroke, migraine, multiple sclerosis, brain injury, Parkinson's disease and epilepsy.

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