

# ADNI Exclusive

A SPECIAL NEWSLETTER FOR PARTICIPANTS IN THE ALZHEIMER'S DISEASE NEUROIMAGING INITIATIVE

WINTER 2007

## Dear Friends and Supporters of ADNI,

Holidays are a time of thanksgiving and celebration. No doubt these months are a time to recount as a nation our many blessings.

As we embark on a new year, we are also entering our second full year of the ADNI study. I cannot think of a more appropriate time than this season to thank you for your commitment to this cause. As a volunteer to this important trial, you are making a difference for generations to come. Like researchers and clinicians, by the virtue of your committed participation, you are helping to make the ADNI study successful. To borrow a line from a past Alzheimer's Association newsletter article, "The time involved, the fear of the tests, and the lack of direct benefit to the volunteer and their hope to prevent their own Alzheimer's all combine to make this a truly heroic contribution to the field."

Each study trial and investment in research contributes to our growing body of knowledge. Nothing can dash our hopes that some day, one day, we will delay the onset of AD, or better yet, prevent it altogether.

Wishing you and yours happy holidays in the weeks and months ahead.

Sincerely,



Michael Weiner, M.D.  
Fellow Participant and ADNI Principal Investigator  
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## Minority Participation

Like many other studies and trials, minority participation is critical to closing the gap in racial disparities. Some studies suggest that AD may be more prevalent among African Americans and Hispanics.

Of the target 822 study participants enrolled in 58 ADNI study sites across the United States and Canada, about 10 percent are minorities. Current minority enrollees include 14 Asian Americans, 39 Black/African Americans, 21 Hispanics/Latinos, 1 American Indian or Alaskan Native, and 9 others.

Participation by special populations will help further the science about how factors such as race and ethnicity impact AD and help researchers better understand disparity in disease incidence, disease prevalence, disease morbidity and mortality – and most importantly, disease survival.

### ADNI Reaches Recruitment Goal!

ADNI has successfully met its enrollment goal of 802 participants.

No memory problems	229
MCI	405
AD	188
Total	822

Thank you to everyone who has helped make this recruitment process a success. We couldn't have done it without YOU! We ask for your continued support.



## NIH News: National Institutes of Health

*One in Seven Americans Age 71 and Older Has Some Type of Dementia, NIH-Funded Study Estimates*

A new analysis suggests that about 3.4 million Americans age 71 and older – one in seven people – have dementia, and 2.4 million of them have Alzheimer’s disease (AD). The study, supported by the National Institutes of Health (NIH), the nation’s medical research agency, is the latest in a series of analyses attempting to assess the prevalence of dementia and AD, the most common form of dementia. Published online last month in *Neuroepidemiology*, the study is the first to estimate rates of dementia and AD using a nationally representative sample of older adults across the United States.

The analysis was conducted as part of the Aging, Demographics and Memory Study (ADAMS), a sub-study of the larger Health and Retirement Study (HRS), the leading resource for data on the combined health and economic circumstances of Americans over age 50. ADAMS and the HRS are sponsored by the National Institute on Aging (NIA), a component of NIH, under a cooperative agreement with the University of Michigan.

According to calculations of the study experts and co-authors, 13.9 percent of Americans age 71 and older have some type of dementia; 9.7 percent of Americans in that age group have AD; and 2.4 percent have vascular dementia. AD accounted for about 70 percent of all dementia cases among people 71 and older.

(Condensed from NIH News press release.)

**References:**

Brookmeyer, R., et al. Projections of Alzheimer’s disease in the United States and the public health impact of delaying disease onset. *American Journal of Public Health* 1998;88:1337-42.

Evans, D.A., et al. Estimated prevalence of Alzheimer’s disease in the United States. *Milbank Quarterly* 1990;68:267-289.

Herbert, L.E., et al. Alzheimer’s disease in the US population: Prevalence estimates using the 2000 census. *Archives of Neurology* 2003;60:1119-22.

Plassman, B.L., et al. Prevalence of dementia in the United States: The Aging, Demographics, and Memory Study. *Neuroepidemiology* 2007;29:125-132.

## Brain Teasers: Give Your Brain a Workout

Just like exercise is good for your body, brain teasers or puzzles can be a good workout for your brain.

Try the brain games below. Guess the meaning of the word pictures (answers below).

If word puzzles aren’t for you, consider finding another mentally stimulating activity to keep your brain sharp!

- |  |                        |
|--|------------------------|
| 1. LONG<br>DO  | 14. i4i                |
| 2. WEAR<br>LONG  | 15. Dribble<br>Dribble |
| 3. T<br>O<br>W<br>N  | 16. ii<br>dark         |
| 4. MIND<br>MATTER  | 17. chawhowhorge       |
| 5. T<br>O<br>U<br>C<br>H                                       | 18. MathThe            |
| 6. CYCLE<br>CYCLE<br>CYCLE                                     | 19. LANG4UAGE          |
| 7. JJJJJOOOOHHHHNNNN<br>JJJJJOOOOHHHHNNNN<br>JJJJJOOOOHHHHNNNN | 20. Search<br>And      |
| 8. WHEATHER  |                        |
| 9. ROFORKAD  |                        |
| 10. HARM good  |                        |
| 11. FAREDCE  |                        |
| 12. HSALF  |                        |
| 13. GESG<br>SEGS<br>GEGS<br>GGES                               |                        |

- 1. Long Overdue
- 2. Long Underwear
- 3. Downtown
- 4. Mind Over Matter
- 5. Touchdown.
- 6. Tricycle
- 7. Long Johns
- 8. A bad spell of weather
- 9. A fork in the road
- 10. More harm than good.
- 11. Red in the face.
- 12. Back flash
- 13. Scrambled eggs
- 14. An eye for an eye
- 15. Double dribble
- 16. Dark under the eyes
- 17. Who’s in charge?
- 18. The aftermath
- 19. Foreign language
- 20. Search high and low

Participants in clinical trials and studies like ADNI are encouraged to be active partners in their care by seeking out advice and accessing information. Publications, resources, materials augmented by information on the Internet and sourced by federal agencies, national patient advocacy organizations and media abound.

Consider bookmarking some of the following Web sites for information and inspiration. Learn the latest information on AD and keep up with the advances in AD clinical trial research. The list also includes a handful of Web sites that feature creative initiatives to raise awareness and support for AD.

## Alzheimer's and Dementia Journal

- ▶ <http://www.alzheimersanddementia.org>  
*The Journal of the Alzheimer's Association site provides full text articles from July 2005 to the present. Access to abstracts is complimentary.*

## Alzheimer's Art Quilt Initiative

- ▶ <http://www.amisimms.com/alartquin.html>  
*A grassroots effort to raise awareness and fund research to find a cure for AD. AAQI's profits are donated to AD research. A nationwide quilt exhibit is crisscrossing the country through July 2009. Smaller works of art are available for purchase.*

## Alzheimer's Association

- ▶ <http://www.alz.org/>  
*Features discussion of the issues faced by people with AD and their families, facts about the disease, research sponsored by their organization, and resources for professionals and families.*

## Alzheimer's Daily News

- ▶ <http://alznews.org/Library/InfoManage/Guide.asp>  
*An excellent resource for keeping up to date with Alzheimer's and aging news. This site archives articles from primary news sources, such as the San Francisco Gate, Medical News Today and CBS to keep you informed.*

## Alzheimer's Disease Education and Referral Center (ADEAR)

- ▶ <http://www.nia.nih.gov/alzheimers/>  
*The National Institute on Aging's AD site, full of information about current research, available publications, and referral sources. Includes links to other resources.*

## Alzheimer's Foundation of America

- ▶ <http://www.alzfdn.org>  
*This site includes information about AD and related illnesses, caregiving strategies and behavioral issues, as well as daily news about Alzheimer's disease, and links to its member organizations and divisions.*

## Alzheimer Research Forum

- ▶ <http://www.alzforum.org/>  
*A scientific knowledge base on AD, with research news, expert commentaries, a section for caregivers, and databases for peer-reviewed articles, drugs, research reagents, grants, jobs, conferences, and more.*

## Clinical Trials

- ▶ <http://www.clinicaltrials.gov/>  
*Features current clinical trials in AD.*

## Dementia Web

- ▶ <http://dementia.ion.ucl.ac.uk/>  
*An excellent British resource for people affected by early-onset AD.*

## eMedicine

- ▶ <http://www.emedicine.com/rc/rc/pcomplete/i9/dementia.htm>  
*A home base of clinical knowledge for physicians and healthcare professionals. This site contains a wide variety of articles on over 7,000 diseases and disorders, all of which are written and edited by other physicians.*

## Mayo Clinic Research Center

- ▶ <http://www.mayoclinic.com/mayo/common/htm/alzheimers.htm>  
*Part of a significant Mayo Clinic site which discusses many diseases and medical conditions. Contains excellent information about AD.*

## Medline Plus: Alzheimer's Disease

- ▶ <http://www.nlm.nih.gov/medlineplus/alzheimersdisease.html>  
*This site of the National Library of Medicine contains links to reports of the federal agencies under the National Institutes of Health. You will also find links to basic science research, clinical trials, coping information, information on diagnosis, directories of centers, latest news, organizations, statistics, and treatment.*

## Memory Bridge

- ▶ <http://www.memorybridge.org>  
*Established for the purpose of promoting communication with and memory preservation for individuals with AD.*

## NOAH

- ▶ <http://www.noah-health.org/>  
*Site of the New York Online Access to Health offers extensive links and information related to normal aging as well as AD in English and Spanish. Many health topics are included, such as nutrition, incontinence, osteoporosis, prostate, and cataracts to name just a few.*

Below is a glimpse at the first results of ADNI. Because of your commitment and participation, information like this is advancing the fight to end AD.

## Early Results from Alzheimer's Neuroimaging Biomarker Project Shows Promise for Faster Study of Therapies

*ADNI Database Now Available to Researchers Worldwide*

Alzheimer's disease (AD) researchers may be able to reduce the time and expense associated with clinical trials, according to early results from the Alzheimer's Disease Neuroimaging Initiative (ADNI). Preliminary results from ADNI show how it might yield improved methods and uniform standards for imaging and biomarker analysis, so these techniques can be employed in the fight against AD.

These first findings were presented at the Alzheimer's Association International Conference on the Prevention of Dementia held in Washington, D.C., June 9-12, 2007.

The ADNI study observes and tracks changes in normal individuals, in people with mild cognitive impairment -- a condition which often precedes Alzheimer's -- and in people with Alzheimer's. Researchers will use PET (positron emission tomography) and MRI (magnetic resonance imaging) scans to track changes in the brain, laboratory analyses of cerebrospinal fluid and blood to study biomarkers, and clinical interviews to track cognitive performance over time. ADNI is expected to improve neuroimaging and biomarker measures and consequently allow faster and more efficient evaluation of potential therapies for Alzheimer's.

The \$60 million, five-year study began recruiting in early 2006, and today, over 800 older people at 58 sites in the United States and Canada participate in the effort. The project is supported primarily by the National Institute on Aging (NIA), a component of NIH, with private sector support from pharmaceutical companies, other organizations and the Alzheimer's Association through the Foundation for NIH. In addition to NIA, other federal partners are the National Institute of Biomedical Imaging and Bioengineering, also part of NIH, and the Food and Drug Administration.

"New treatment options are urgently needed for the millions of people who have Alzheimer's and for those at risk as the population ages," said Richard J. Hodes, M.D., Director of the NIA. "This preliminary report on aspects of ADNI is quite encouraging."

ADNI principal investigator Michael Weiner, M.D., of the Department of Veterans Affairs Medical Center, University of California, San Francisco, delivered a progress report and

described the new ADNI database during the conference. Nine other ADNI researchers shared reports on early results and preliminary findings from various studies including:

- **PREDICTING ALZHEIMER'S** — A University of California, San Diego study found that analyses of MRI and PET images could detect early changes in cerebral cortex thickness in brains of people with mild cognitive impairment over a six-month period. Further study, the researchers said, would be needed to see if the changes, with other brain measures, could predict conversion from mild cognitive impairment to Alzheimer's.
- **VALIDATING PET SCANS** — A study reported by scientists at the Banner Alzheimer's Institute, Phoenix, AZ, and colleagues compared changes over time in PET scans of glucose metabolism in people with normal cognition, mild cognitive impairment and Alzheimer's. The study found that scans correlated with symptoms of each condition and that images from different clinical sites were comparable (or consistent). This study suggests the validity of PET scans for use in future clinical trials.
- **MRI RELIABILITY** — A Mayo Clinic, Rochester, MN, study found that a standard anatomical model of a brain can be used successfully to monitor performance of MRI scanners at many different clinical sites. This will ensure accuracy of the MRI images produced from ADNI volunteers using 80 MRI scanners from scores of sites over five years.
- **BIOMARKER ANALYSIS** — At the University of Pennsylvania, Philadelphia, scientists and colleagues compared analyses of cerebrospinal fluid samples among seven laboratories. The study evaluated differences within and among the labs' performance. This study will ensure that methods for measuring biomarkers are accurate and comparable across laboratories.

An important achievement of ADNI is the creation of a publicly accessible database available to qualified researchers worldwide. The database contains thousands of MRI and PET scan brain images and clinical data and will include biomarker data obtained through blood and cerebrospinal fluid analyses. ADNI includes samples and brain scans from 188 people with Alzheimer's, 405 people with mild cognitive impairment and 229 healthy people. All volunteers are between ages 55 and 90. Confidentiality of the participants is rigorously protected.

"The database gives ADNI researchers easy access to a huge body of data. But its added value is its design as an international research resource, available worldwide to other researchers interested in neurodegenerative disease," said Susan Molchan, M.D., NIA's program director for ADNI.