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**LATEST ISSUE OF *ALZHEIMER'S & DEMENTIA* EXPLORES NEW IDEAS  
FOR CAUSE, SCREENING, RISK FACTORS FOR ALZHEIMER'S**

CHICAGO, April 19, 2006 – Though publishing only its fourth issue, *Alzheimer's & Dementia: The Journal of the Alzheimer's Association* continues to feature valuable new data, and stimulate thought and discussion with provocative perspectives on key issues, such as alternative theories for the cause of Alzheimer's.

Included in the journal's April 2006 issue are:

- Screening – A call for consideration of dementia risk factors in individuals at age 50, with routine yearly screening after age 75.
- Cause – A new theory for the cause of Alzheimer's based on research with a well-known diabetes drug.
- Risk Factors – A large-scale observational study in twins, some tracked for as long as 45 years, suggests education, physical exercise and inflammatory load (as shown by tooth loss) as risk factors for Alzheimer's disease and vascular dementia.

**“Should older adults be screened for dementia?” J. Wesson Ashford, et. al.**

Screening is common for various types of cancer, diabetes, high blood pressure, high cholesterol and depression to identify disease states early, and to encourage early treatment and lifestyle interventions. The question of whether to screen for Alzheimer's disease (AD), especially in cognitively healthy people, has been controversial. For instance, in 2005, the U.S. Preventive Services Task Force stated that “the evidence is insufficient to recommend for or against routine screening for dementia in older adults.”

The 12 authors of this article, who are an international group of scientists interested in dementia screening, state that there is extensive evidence of substantial under-recognition of dementia and Alzheimer's, even into the disease's moderate and severe stages. They suggest that screening could

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largely redress this gap, and feel that waiting to initiate dementia assessment until after the disease is suspected delays both diagnosis and the use of the available symptomatic treatments. The authors state that there are many adequate tests that have been well studied for both dementia and AD screening. The group suggests that an additional benefit of screening would be to increase public awareness of dementia and Alzheimer's and bring more patients into research studies, possibly accelerating the discovery of new treatments and preventive approaches.

Yet, even within the group of authors there is disagreement on the issue. The majority of the article's authors "support the consideration of dementia risk factors in individuals at age 50, with routine yearly screening after age 75." Others "remain concerned that the benefits of currently available treatments do not yet support a general screening recommendation."

In the article, the authors state their desire to develop a consensus on the widespread institution of screening policy for dementia. *Alzheimer's & Dementia* encourages members of the scientific community to add their perspective by contributing short commentaries on this subject.

**"Perspective on a pathogenesis and treatment of Alzheimer's disease." Allen D. Roses and Ann M. Saunders**

In this provocative article, Drs. Roses and Saunders present an alternative theory to the amyloid hypothesis for the cause and progression of Alzheimer's disease. Roses and Saunders led the team that discovered APOE4, one common variant of the cholesterol-transporting APOE gene, which is a confirmed risk factor for late-onset Alzheimer's.

The new hypothesis is supported by the results of 24-week randomized clinical trial of an unmarketed formulation of rosiglitazone maleate (Avandia, GlaxoSmithKline) in the treatment of Alzheimer's. Rosiglitazone is an insulin sensitizer used to treat type 2 diabetes. The researchers propose that changes in the way brain cells use sugar to generate energy eventually lead to impaired brain cell function and cell death, and that these are the key elements that lead to the development of plaques, tangles, and brain atrophy seen in Alzheimer's. Diabetes is a known risk factor for dementia, and diabetes in midlife has been linked to the subsequent development of dementia decades later.

Exploratory analyses of the rosiglitazone data raised the possibility of an interaction between treatment efficacy and presence or absence of the APOE4 variant. APOE4 noncarriers showed significant clinical

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improvement in the trial, while those who had APOE4 did not. The authors suggest that, if subsequently confirmed, this preliminary finding would provide the first clinically relevant use of genomic information in the selection of candidates for an Alzheimer's treatment.

A commentary points out the exciting possibility that decades of research and drug development for diabetes may now be relevant to our understanding of Alzheimer's.

**“Potentially modifiable risk factors for dementia in identical twins.” Margaret Gatz, et. al.**

The purpose of this study was to test nongenetic factors that might explain why, in some twin pairs, one twin may get Alzheimer's when the other does not, or that there is a significant difference in age of onset of dementia between the two twins. The researchers examined risk factors including education, engaged lifestyle in midlife, and early life circumstances as demonstrated by tooth loss, short adult height, and parental social class.

Data are from the HARMONY study, including members of the Swedish Twin Registry age 65 and older and alive in 1998. The researchers looked at the data in two ways: a case-control design to evaluate the risk factors and a co-twin control design that permits testing nongenetic risk factors while controlling for genetic influences. Case-control analyses included 310 dementia cases and 3,063 nondemented controls. There were 106 identical twin pairs discordant for dementia.

Case-control findings showed that history of tooth loss before age 35 and low educational attainment were significant risk factors for Alzheimer's, with short adult height also contributing to risk for total dementia. In co-twin control analyses, only history of tooth loss before age 35 was a significant risk factor for Alzheimer's, whereas low educational attainment also contributed to risk for total dementia and lack of physical exercise to risk for non-Alzheimer's dementias (largely but not exclusively vascular dementia).

Based on the association with tooth loss, the authors suggest that further investigation of inflammatory load as a risk factor for Alzheimer's is warranted.

## **About Alzheimer's & Dementia**

*Alzheimer's & Dementia: The Journal of the Alzheimer's Association*, published quarterly by Elsevier, presents the latest original, peer-reviewed, basic and clinical research in the field, including early detection, prevention and treatment. Coverage extends from healthy brain aging to all forms of dementia, and includes material of interest to both the basic scientist and practitioner. *Alzheimer's & Dementia* focuses on bridging the knowledge gaps across diverse investigations ranging from the bench to the bedside. (<http://www.alzheimersanddementia.org>)

## **About the Alzheimer's Association**

The Alzheimer's Association, the world leader in Alzheimer research, care and support, is dedicated to finding prevention methods, treatments and an eventual cure for Alzheimer's. For more than 25 years, the donor-supported, not-for-profit Alzheimer's Association has provided reliable information and care consultation, created supportive services for families, increased funding for dementia research, and influenced public policy changes. For more information, visit [www.alz.org](http://www.alz.org) or call 800-272-3900.

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