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## **ADVANCEMENTS IN TREATMENT, DIAGNOSIS AND RISK REDUCTION STRATEGIES HIGHLIGHTED AT ALZHEIMER'S ASSOCIATION INTERNATIONAL CONFERENCE**

**AMSTERDAM, July 20, 2023** – New research reported at the [Alzheimer's Association International Conference](#)® (AAIC®) 2023 covered the breadth of Alzheimer's disease and dementia research, including advancements in treatment, early and accurate diagnosis, and our understanding of risk factors for Alzheimer's and other dementias.

AAIC is the premier annual forum for presentation and discussion of the latest Alzheimer's and dementia research. This year's conference took place both virtually and in-person in Amsterdam, Netherlands, and attracted over 10,000 attendees and more than 3,000 scientific presentations.

### **Advances in Treatments, Clinical Trial Results**

The Alzheimer's Association highlighted results from trials of drug and non-drug interventions for Alzheimer's disease at AAIC 2023.

New, more complete data were reported at AAIC 2023 by Eli Lilly from the [TRAILBLAZER-ALZ 2 Phase 3 clinical trial of donanemab](#) in early symptomatic Alzheimer's disease. With this fuller picture of the donanemab Phase 3 results, we see additional convincing scientific evidence that thoroughly removing beta amyloid from the brain is associated with significant slowing of disease progression in people living with early Alzheimer's. The results of this trial also further illustrate that initiating treatment as early as possible in the course of the disease enables the possibility of a bigger beneficial effect, but also that there is potential for slowing of disease progression even when treatment is started later. The progress we've seen in this class of treatments, as well as the diversification of potential new therapies over the past few years, provides hope to those impacted by this devastating disease.

[Two new therapeutic approaches for Alzheimer's based on CRISPR gene editing](#) were reported at AAIC. One aims to reduce the impact of the strongest known Alzheimer's risk gene, APOE-e4. The other strives to reduce production of a toxic protein in the brain, beta amyloid, which is a hallmark of Alzheimer's and the target of recently-approved treatments. CRISPR technology is making drug target identification faster with the goal of speeding up the drug discovery process, and building platforms for the development of next-generation treatments.

Non-drug interventions were also highlighted at AAIC, including [results from the Aging and Cognitive Health Evaluation in Elders \(ACHIEVE\) study](#), the largest randomized, controlled clinical trial of hearing aids for reducing long-term cognitive decline in older adults. While the results were negative in the total study population, the hearing intervention slowed cognitive decline in older adults with mild to moderate hearing loss by 48% in a pre-specified segment of the study population consisting of 238 people participating in an ongoing observational study of heart health. The three-year intervention included use of hearing aids, a hearing "toolkit," and ongoing instruction and counseling with an audiologist.

### **Blood Tests: The Next Frontier in Alzheimer's Diagnosis**

Advancements in technology and practice reported for the first time at AAIC 2023 demonstrate the [simplicity, transportability and diagnostic value of blood-based biomarkers for Alzheimer's](#).

Researchers from University of Gothenburg, Sweden reported results from a simple, finger prick blood test that shows promise in the ability to detect markers of Alzheimer's using a single drop of blood dried on spot cards and shipped overnight between two countries, without temperature control or cooling. If validated through additional research, this test could offer a quick, noninvasive and cost-effective option that is simple enough to be performed independently, or by caregivers. It may be particularly valuable for use in rural districts or other lower resourced areas.

A research group with Lund University, Sweden conducted the first study to examine the use of blood-based biomarkers for Alzheimer's in primary care and compare them to the diagnostic accuracy of primary care physicians. A blood test was more than 80% accurate in identifying Alzheimer's-related changes — significantly better than doctors in the study who did not have access to the test. Blood tests for Alzheimer's have great potential for improving early diagnosis, diagnostic accuracy and proper treatment of people with Alzheimer's.

### **New Use of Opioids and Mortality Among Older Adults With Dementia**

[New opioid use in older adults with dementia](#) is associated with a significantly increased risk of death, including an eleven fold increase in the first two weeks, according to research presented at AAIC 2023. Researchers from the Danish Dementia Research Centre used data from everyone in Denmark aged 65 and older diagnosed with dementia between 2008 and 2018, including both home-living and nursing home residents. Of that group, 42% of those diagnosed with dementia redeemed a prescription for an opioid at a pharmacy.

They found 33.1% of study participants died within 180 days after initiating their first opioid prescription, compared with 6.4% of those unexposed to opioids. After adjusting for potential differences between groups, researchers found a four fold increase in excess mortality risk. The risk was greatest in the first 14 days, where mortality for all opioids was increased eleven fold. These initial findings emphasize the need for discussion between the patient, family and physician about pain medication.

### **Chronic Constipation Associated With Cognitive Decline**

New research demonstrating the [relationship between gut health and the brain](#) were revealed at AAIC. A researcher from University of Massachusetts, Amherst found individuals with chronic constipation (bowel movements every three days or more) had significantly worse cognition, equivalent to three years more of chronological cognitive aging, than those with healthy bowel movement patterns.

Plus, researchers from University of Texas San Antonio found specific gut bacteria that are associated with increased dementia risk, as well as gut bacteria that may be neuroprotective. Previous research has connected the health and makeup of the gut microbiome, which is the community of microorganisms that live in our digestive tracts, with a number of other vital body functions.

### **First-ever Nationwide Estimates of U.S. County-Level Alzheimer's Prevalence**

The first-ever nationwide estimates of the [county-level prevalence of people with Alzheimer's dementia](#) — in all 3,142 United States counties — were revealed at AAIC 2023. Researchers from Rush University Medical Center in Chicago found that the eastern and southeastern U.S. have the highest prevalence of Alzheimer's dementia. Higher percentages of older people and Black and Hispanic, all groups at higher risk for the disease, may explain the elevated prevalence in those regions. The findings can help guide the allocation of resources to public health programs for individuals and families affected by Alzheimer's in those regions.

### **Volunteering Later in Life May Promote a Healthy Brain**

Reported for the first time at AAIC 2023, researchers from University of California, Davis examined volunteering habits among an ethnic and racially diverse population of older adults and found that [volunteering was associated with better baseline scores on tests of memory, thinking and planning](#). The researchers stated volunteering may be important for better cognition in late life and could serve as a simple intervention in older adults to protect against Alzheimer's and other dementias.

### **About the Alzheimer's Association International Conference® (AAIC®)**

The Alzheimer's Association International Conference (AAIC) is the world's largest gathering of researchers from around the world focused on Alzheimer's and other dementias. As a part of the Alzheimer's Association's research program, AAIC serves as a catalyst for generating new knowledge about dementia and fostering a vital, collegial research community.

AAIC 2023 home page: [www.alz.org/aaic/](http://www.alz.org/aaic/)

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

The Alzheimer's Association is a worldwide voluntary health organization dedicated to Alzheimer's care, support and research. Our mission is to lead the way to end Alzheimer's and all other dementia — by accelerating global research, driving risk reduction and early detection, and maximizing quality care and support. Our vision is a world without Alzheimer's and all other dementia®. Visit [alz.org](http://alz.org) or call 800.272.3900.

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