

**Advancing the Science:
The Latest in Alzheimer's and Dementia Research**

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The Alzheimer's Association leads 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 dual mission symbol represents the abstract forms of a human head and a beaker, emphasizing the people and the science behind our cause.

- Care & Support
- Advocacy
- Education & Awareness
- Research
- Diversity, Equity & Inclusion

Our Time Today

- About Alzheimer's & Dementia
- Early Detection & Diagnosis
- Treatment
- Risk Reduction
- Alzheimer's Association Initiatives & How You Can Get Involved



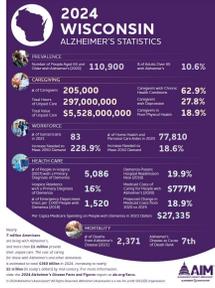




Wisconsin

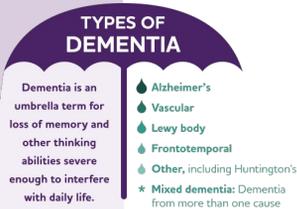
- Disease Prevalence: 110,900 WI residents
- Family Impact: 205,000 Caregivers
 - 62.9% have chronic conditions
 - 27.8% have depression
 - 18.9% poor physical health

An 228.9% increase in geriatric workforce is needed to meet the projected 2050 demand



What is Dementia?

- Dementia is a collection of symptoms related to cognitive decline
- This can include
 - Cognitive symptoms
 - Behavioral symptoms
 - Psychological symptoms
- **Alzheimer's is the most common cause of dementia**
- Not everyone with cognitive decline has dementia. Some causes of cognitive decline are reversible.



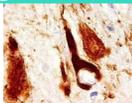
The Hallmarks of Alzheimer's

1 Plaques



Made up of beta amyloid

2 Tangles



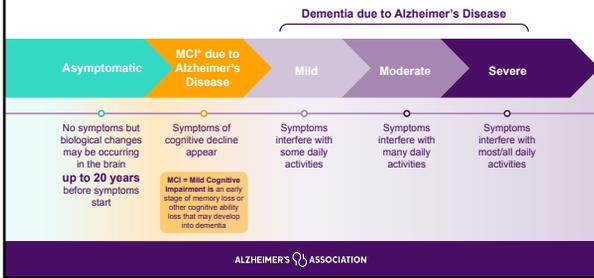
Made up of tau

3 Brain Cell Death



Healthy brain vs. Advanced Alzheimer's

Alzheimer's Disease is a Continuum



Early Detection & Diagnosis



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Benefits of an Early and Accurate Diagnosis



Medical Benefits

- Access to current treatments
- An opportunity to participate in clinical trials
- A chance to prioritize health, including making lifestyle changes



Emotional and Social Benefits

- More time to plan for the future, access resources
- Time to plan end-of-life decisions



Financial Benefits

- Cost savings for families
- Cost savings for the U.S. government

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How is Alzheimer's Currently Diagnosed?

There is no single test that can determine if a person is living with Alzheimer's disease or another dementia. Doctors use a combination of diagnostic tools combined with medical history to make an accurate diagnosis.



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Biomarkers

A New Frontier in Alzheimer's Detection, Diagnosis and Research

Cerebrospinal fluid (CSF) analysis can use to detect amyloid in the CSF (taken by a lumbar puncture), which can be predictive of changes in the brain.

There are several emerging **blood tests** on the market that can indicate presence of Alzheimer's markers years before symptoms emerge.

Blood tests for Alzheimer's should be prescribed by a doctor and followed by other methods of diagnosis.



Positron emission tomography (PET) scan results aid doctors in diagnosing and treating memory conditions. There are FDA approved PET scans that measure amyloid and tau.

Magnetic Resonance Imaging (MRI) can help doctors rule out other symptoms that may be causing dementia symptoms, as well as track treatment side effects.

Other **emerging biomarkers** include:

- examining skin and saliva to indicate early biological changes in the brain
- retinal imaging

which show promise to be low cost, accessible detection methods for Alzheimer's.

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Research Roundup

Identifying New Biomarkers

- In addition to amyloid and tau — two key hallmarks in Alzheimer's disease — researchers are exploring emerging markers of cell death, inflammation and vascular related changes.

Standardizing Biomarkers

- Alzheimer's Association leads the Global Biomarker Standardization Consortium (GBSC), which conducts studies that aim to standardize use of fluid biomarkers across populations.

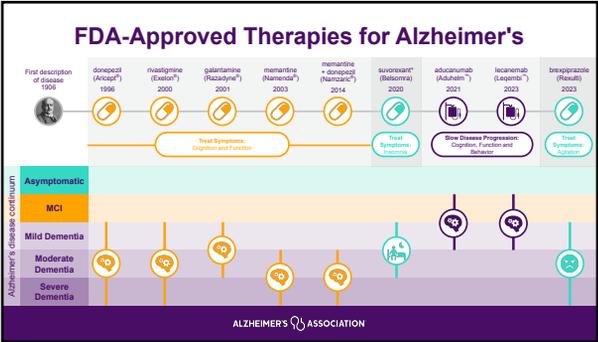
Bringing New Tests to Doctors' Offices

- As new biomarkers reach doctor's offices, the Alzheimer's Association publishes recommendations and guidance for doctors for use of imaging, fluid and other diagnostic biomarkers for Alzheimer's disease.

These programs provide a strategy to determine the most valuable tests that can be used to detect, diagnose and inform treatment for individuals with Alzheimer's and other dementia.

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Reducing Risk of Dementia

10 HEALTHY HABITS FOR YOUR BRAIN

- Positive, everyday actions can make a difference in brain health, even lowering the risk of cognitive decline and possibly Alzheimer's and dementia.
- Up to **40%** of dementia cases could be prevented or delayed by targeting modifiable risk factors.
- Research suggests **combining multiple healthy factors** may be the most impactful.
- Nonmodifiable risk factors include age, genetics and sex/ gender/ race/ ethnicity.

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U.S. POINTER

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WHAT: Two-year clinical trial across the U.S. **RESULTS EXPECTED, SUMMER 2025**

HOW: Study intervention simultaneously targets multiple risk factors with a goal to protect cognitive function in older adults at increased risk for cognitive decline.

Results from this trial will inform the development of accessible and sustainable community-based programs for dementia prevention.

WORLD WIDE FINGERS

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WHAT: Global network of lifestyle intervention trials that share experiences, data and joint initiatives to prevent cognitive impairment & dementia worldwide

HOW: World-Wide FINGERS network now includes research teams in 62 countries

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Alzheimer's Research Funding is at an All-Time High

7x

\$3.8B

Increase Since the Passage of the Alzheimer's Accountability Act

Annually

Alzheimer's and Related Dementia Funding at the National Institutes of Health (NIH)

Source: NIH (<https://report.nih.gov/funding/category/total-spending/>) with the 2024 figure reflecting NIH's estimated 2023 funding plus the additional increase of \$100M appropriated through the FY2024 funding bill.

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Get Involved in Research

- TrialMatch is a **free clinical studies matching service** designed to provide a **customized list** of potential study matches to each user.
- Healthy and cognitively impaired people from all backgrounds are needed to participate in Alzheimer's and dementia research.



SCAN
to find
out more



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powered by CareMatch Connect

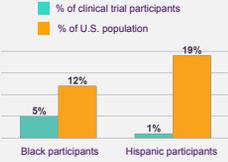
**Over 370,000 users and includes 750+ clinical studies around the world.*

- 731** Alzheimer's Disease
- 351** Mild Cognitive Impairment
- 36** Vascular Dementia
- 110** Other Dementia

ALZHEIMER'S ASSOCIATION 1st of March 2024

Advancing Health Equity

Racial and ethnic populations are underrepresented in clinical trials.



Group	% of clinical trial participants	% of U.S. population
Black participants	5%	12%
Hispanic participants	1%	19%

Legislation like the bipartisan **Equity in Neuroscience and Alzheimer's Clinical Trials (ENACT) Act** will increase education and outreach to underserved and underrepresented communities, encourage diversity of clinical trial staff, and make it easier for underrepresented groups to participate in research.

The Alzheimer's Association is **committed to diversity, equity and inclusion** in Alzheimer's research by supporting researchers from diverse backgrounds.

- Alzheimer's Association Core Grant Programs to Promote Diversity
- ISTAART Diversity and Disparities PIA
- AAIC Advancements: Health Equity

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-  Alzheimer's Association alz.org
-  MN Geriatrics Workforce Enhancement Program mngwep.umn.edu
-  ACT on Alzheimer's actonalz.org
-  UMN Department of Public Health health.state.mn.us/diseases/alzheimers/dementia.html

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