



Our Work is About People and Science

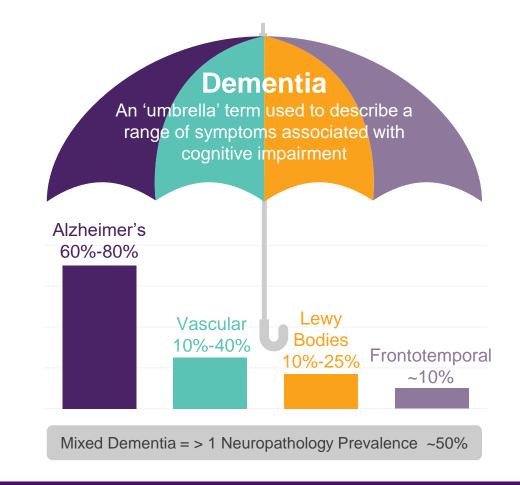


The Alzheimer's Association is a worldwide voluntary health organization dedicated to Alzheimer's care, support and research.

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.

Dementia is a Syndrome

- Dementia is a collection of symptoms related to cognitive decline
- Can include cognitive, behavioral and psychological symptoms
- Due to biological changes in the brain
- Alzheimer's is most common cause
- Mixed dementia is very prevalent
- Some causes of cognitive decline are reversible and not truly dementia





2022 Alzheimer's Disease Facts and Figures

More than 80% of Americans know little or are not familiar with mild cognitive impairment (MCI), which can be an early stage of Alzheimer's.

More than
6 million

Americans are living with
Alzheimer's

1 in 3
seniors dies with Alzheimer's

These caregivers provided more than 16 billion hours valued at nearly

\$272

Between 2000 and 2019, deaths from heart disease have decreased

7.3%

while deaths from Alzheimer's disease have

increased

145%

In 2022, Alzheimer's and other dementias will cost the nation

\$321

By 2050, these costs could rise to nearly

\$1 trillion

Over
11 million
Americans

provide unpaid care for people with Alzheimer's or other dementias

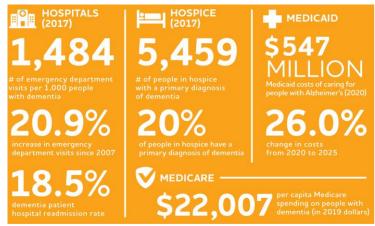


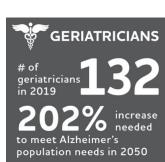
ALZHEIMER'S \\ ASSOCIATION'

Washington State Alzheimer's Facts



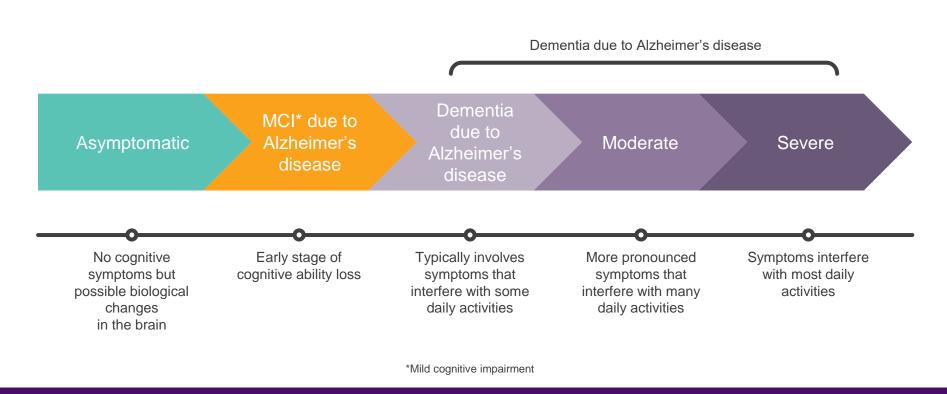






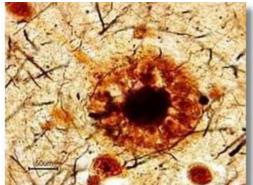


Alzheimer's Disease is a Continuum



Hallmarks of Alzheimer's Disease

Neuritic Plaques



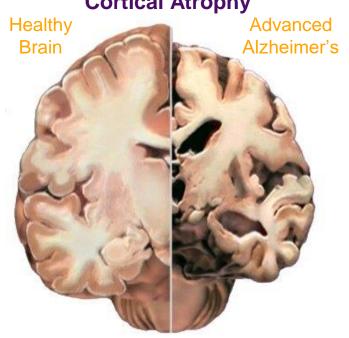
Extracellular deposits of **beta-amyloid**

Neurofibrillary Tangles



Intracellular deposits of hyperphosphorylated **tau**

Neurodegeneration Cortical Atrophy



What May Impact Risk of Cognitive Decline or Dementia



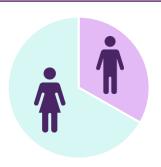
Constellation of reasons may be fundamental and unique to each individual

Social determinants of health may impact some or all of these factors

Strength of our understanding is different across risk factors

Need to Study Risk from ALL Angles

Gender, Racial and Ethnic Disparities in Alzheimer's Prevalence and Clinical Trials



Almost **two-thirds** of Americans with Alzheimer's are **women.**

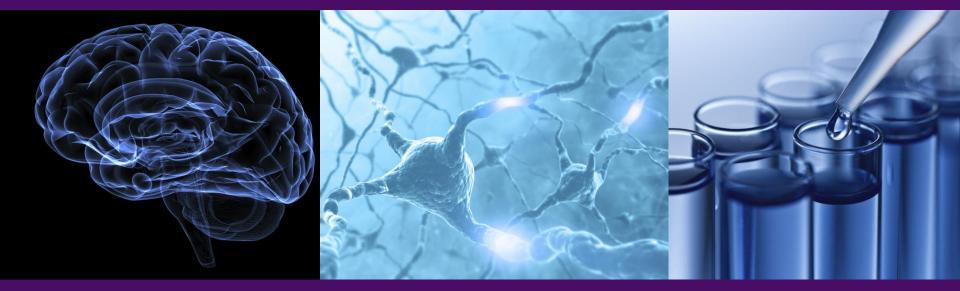


Older **Black** and **Hispanic** Americans are disproportionately more likely than older **Whites** to have Alzheimer's or other dementias.



been historically
underrepresented in
clinical studies,
underscoring the need for
more diversity in
dementia research.





ALZHEIMER'S (ASSOCIATION

THE LARGEST NONPROFIT FUNDER

OF ALZHEIMER'S & ALL DEMENTIA RESEARCH IN THE WORLD

\$310+
million currently active

950+

projects

48
countries

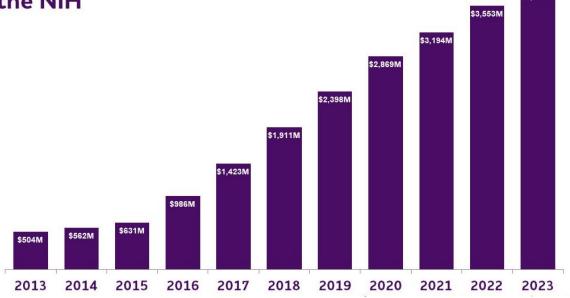
We Advocate



Today, Alzheimer's and dementia research funding is more than \$3.7 billion annually. Since the passage of the Alzheimer's Accountability Act, Congress has increased Alzheimer's and dementia research funding more than seven-fold.







Source: NIH (https://report.nih.gov/funding/categorical-spending) with the 2023 figure reflecting NIH's estimated 2022 funding plus the additional increase of \$226M appropriated through the FY2023 omnibus.

RESEARCH IN YOUR COMMUNITY

We have played a role in nearly every significant development in Alzheimer's science to date

Washington

Active and Historical Grants

- 37 proposals between 1993-2020 (4 active)
- Total ~\$7.14M (~\$1.6M active)

Number of Scientific Reviewers

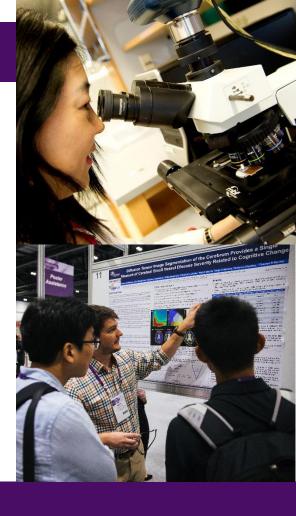
• 61 reviewers: 665 critiques

ISTAART Membership

• 57 ISTAART members

Funded Researchers

 University of Washington, Washington State University, Seattle Institute for Biomedical and Clinical Research.



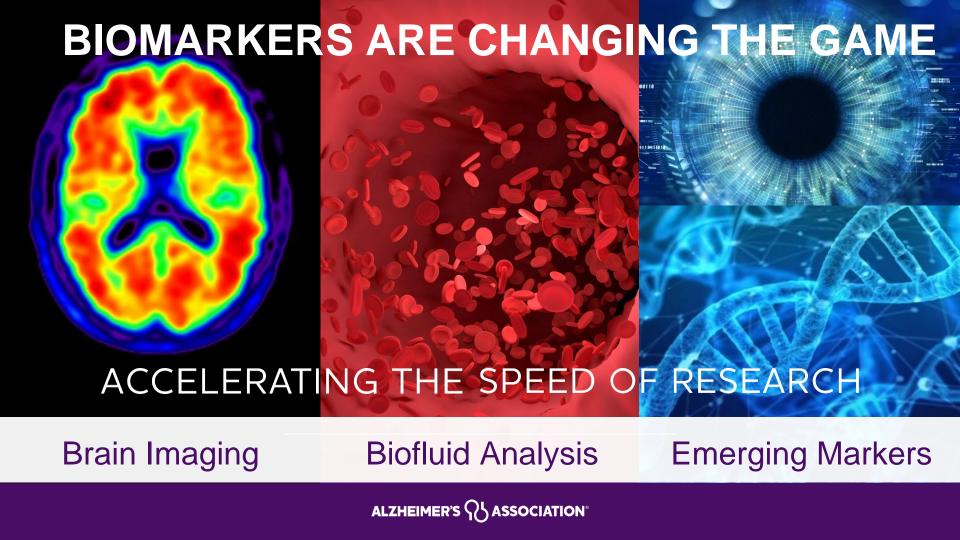


S Early Detection and Diagnosis





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Modernizing the Diagnosis

Cognitively Unimpaired

Alzheimer's Dementia

Biomarkers

History & Cognition

20

years or more before symptoms appear, the brain changes of Alzheimer's may begin.

What is a Brain PET Scan?

- Positron emission tomography (PET)
 scan results aid doctors in diagnosing and
 treating memory conditions
- PET scan agents used to measure amyloid and tau, two hallmarks of Alzheimer's, are FDA-approved
- Scan information can help exclude
 Alzheimer's disease, aid in diagnosis, and may help guide patient management.



How Have Brain PET Scans Helped with Memory Care?



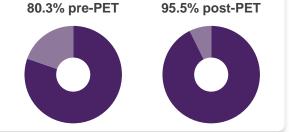
National study on utility of amyloid PET scans

- 18,500 Medicare beneficiaries
- With mild cognitive impairment (MCI) or dementia of uncertain cause

The hypothesis is that, in diagnostically uncertain cases, amyloid PET results will lead to significant changes in patient management, and this will translate into improved medical outcomes

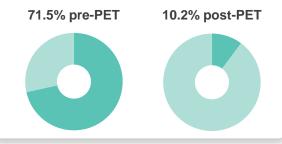


In patients with a **positive** amyloid scan, the rate of Alzheimer's diagnosis increased from:



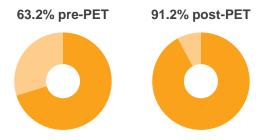


An even larger effect was seen in patients with a **negative** amyloid scan, as the rate of Alzheimer's diagnosis decreased from:





Having access to the results of PET imaging had a substantial impact on the use of Alzheimer's medications. Specifically, for patients diagnosed with dementia with a positive amyloid PET scan, the use of Alzheimer's drugs increased from:



Building on the IDEAS Study, the New IDEAS Study will Recruit a Diverse Cohort of 7,000 Participants

Will assess if brain **PET scan** results help guide doctors in diagnosing and treating memory conditions in participants of **diverse racial and ethnic backgrounds**.











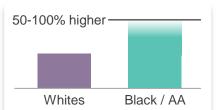




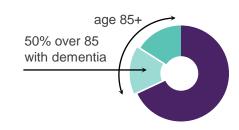
Information has not been gathered in these populations and have been grossly understudied by scientists



They experience disproportionate rates of dementia, and thus poorer quality-of-life associated outcomes (e.g., hospitalizations)



In comparison to Whites, Blacks/African Americans have a **50-100%** higher rate of dementia and Hispanics/Latinos a similar or higher rate



In 35 years, one-third of the U.S. population over the age of 85 will be Hispanic/Latino, Black/African American or other ethnoracial minority; if trends persist, > 50% of these individuals will suffer from dementia

Progress Toward a Blood Test

- Global race to uncover and develop blood based biomarkers for Alzheimer's and other dementia
- More research validating amyloid beta and tau in blood by comparing to imaging and cognitive testing
- New research on blood tests for alpha synuclein and neurofilament light and other markers
- AAIC 2021 was the first time rigorous plasma p-tau data were presented in the context of a clinical trial linking a treatment effect to reduction of amyloid in the brain and cognitive decline.
- While not ready for broad use in the clinic, blood based biomarkers are making remarkable progress



Progress Towards Risk Reduction and More Effective Treatments



Feeding the Therapeutic Discovery Pipeline



Preclinical (years to decades)





- laboratory experiments
- tests cellular and animal models

Phase I (months)



- tests human volunteers
- · risks and side effects

Phase II (months to years)



- · tests more volunteers
- · more information about safety and

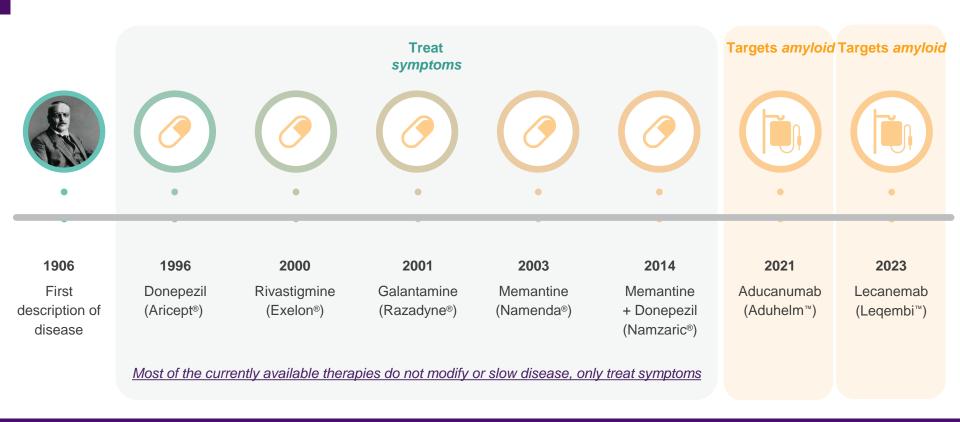
Phase III (years to decades)





- often two trials with similar study design
- tests even more volunteers
- · provides chief evidence

FDA-Approved Therapies for Alzheimer's



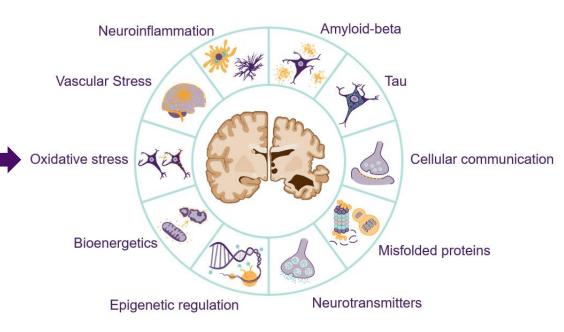
A New Phase of Treatment



2021 Aducanumab Lecanemab Donanemab (Aduhelm™) (Leqembi™)

2023

Today, Over 140 Unique Therapies Being Tested in Clinical Trials that Target Multiple Aspects of Alzheimer's Biology



Focus on Risk Reduction

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

Cognitive & Social Stimulation

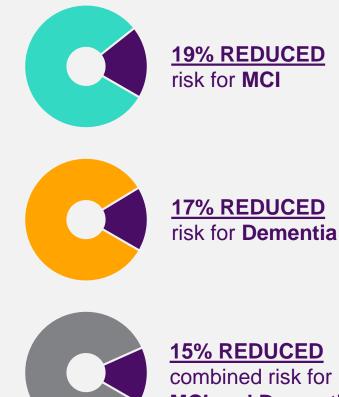


The SPRINT-MIND Study

First Study to Demonstrate Reduction of **New Cases of Cognitive Impairment**

Suggests you may reduce your risk of MCI and dementia by addressing cardiovascular disease risk factors

- 9,000+ people, Over age 50, All-cause dementia risk
- Standard vs. Intensive Blood Pressure Intervention.
- Intensive treatment 120 systolic vs. 140 systolic
- Dramatic reduction of small vessel disease on MRI
- Alzheimer's Association and NIH funded followup study SPRINT-MIND 2.0 to clarify impact on dementia risk





U.S. Study to Protect Brain Health through Lifestyle Intervention to Reduce Risk





Two Year | Multi-Center (Five U.S. Sites) | Randomized Clinical Trial **2,000 Participants** | 60-79 Years Old | At Risk for Cognitive Decline



Self-Guided and Structured Intervention Groups
Physical Activity | Nutrition | Intellectual Engagement | Health Coaching
Differ in Format, Expectations, and Accountability



Commitment to **Community-Based**Outreach, Recruitment and Representation



- ✓ Over 1800 Recruited
- √ ~ 30% from Underrepresented Populations

NIA Supported **Ancillary Studies**:

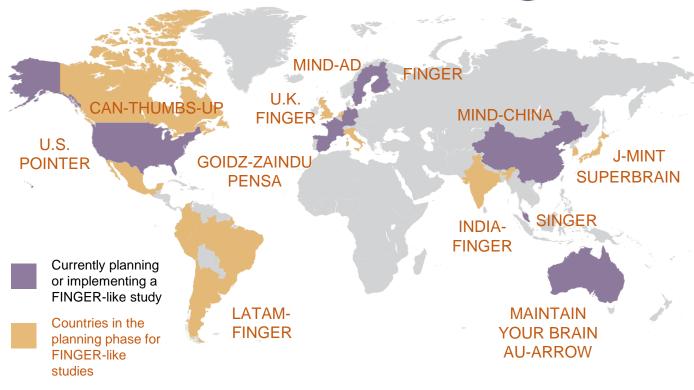
- ✓ POINTER-Neuroimaging
- ✓ POINTER-zzz
- ✓ POINTER-Neurovascular
- ✓ POINTER-Microbiome

If the interventions prove effective, this study will lead the way in the development of an accessible and sustainable community-based program for prevention.

U.S. POINTER Is Not Alone

World-Wide FINGERS is a large, international network sharing experiences and data, and is collaborating to prevent cognitive impairment & dementia worldwide.





Every study helps scientists learn more about the disease they are trying to address.

There is an urgent need for inclusion of individuals of under-represented backgrounds in clinical trials so that new discoveries can benefit all.



How to Get Involved in Research



Over 370,000 Users

750+ Clinical Studies at Locations around the world

alz.org/trialmatch

TrialMatch is a free clinical studies matching service designed to provide a customized list of potential study matches to each user.



Alzheimer's disease



Mild Cognitive Impairment



Vascular Dementia

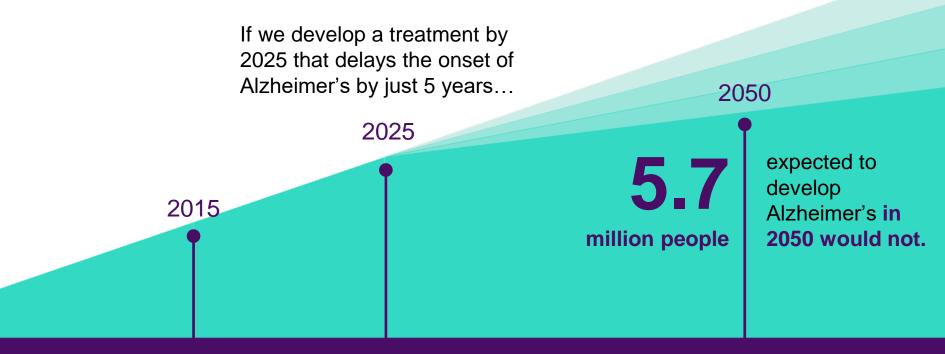


Other Dementia



Changing the Trajectory of Alzheimer's Disease

In the future, treatment will likely include a powerful combination of effective medicines and risk reduction strategies.



Get news and viewpoints on the latest Alzheimer's research developments.





SCIENCE HUB alzheimer's 95 association



In The News Clinical Trials

IN THE NEWS

Early Detection May Help Reduce Alzheimer's Risk

Earlier diagnosis may be the future of Alzheimer's treatment. Scientists believe we may need to begin treating the disease when mild cognitive impairment first appears, versus waiting until Alzheimer's has set in.

TODAY 1 day ago





ALZ State

IN THE UNITED STATES. ALZHEIMER'S AND DEMENTIA DEATHS HAVE INCREASED 16% DURING THE COVID-19

Alzheimer's Association Research Resources



Association's Website | alz.org



Research at the Association | alz.org/research



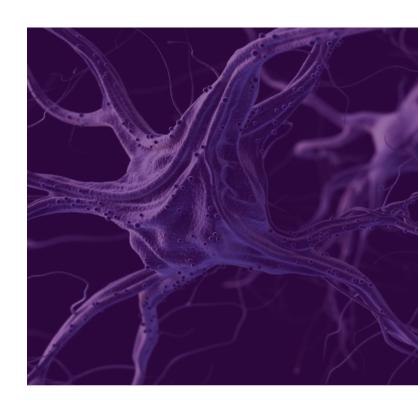
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Join a Clinical Trial | alz.org/trialmatch



Contact the 24/7 helpline | 800-272-3900



S In Summary...

- Alzheimer's Association is the global leader for Alzheimer's and dementia science
- Exciting time in research
 - New tools for detection and diagnosis
 - Growing diversity of therapies under investigation
 - New resources and strategies to promote diverse participation
- There is <u>HOPE</u> in research



Vision: A world without

Alzheimer's disease

and all other dementia.™

1-800-272-3900



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