

Hot Topics in Alzheimer's and Dementia Research

From Early Detection to Treatments to Risk Reduction

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Disclosures

Courtney Kloske, Ph.D. Full-time employee of the Alzheimer's Association.

Alzheimer's Association

The Alzheimer's Association forges partnerships with all those with the shared commitment to end Alzheimer's and other dementia, including Alzheimer's organizations around the globe, the National Institutes of Health, National Institute on Aging, universities, corporations and the pharmaceutical, biotech and device industries. With our broad partnerships, we are committed to transparency. The Alzheimer's Association received 1.66 percent of its total 2024 contributed revenue from the biotechnology, pharmaceutical, diagnostics, and clinical research industries. This and additional information can be found at www.alz.org/about/transparency.

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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 & Medical Affairs



Community Engagement

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Our Time Today

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

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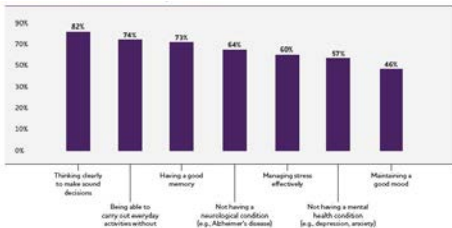
Special Report Brain Health in America: Understanding and Supporting Lifelong Cognitive Health



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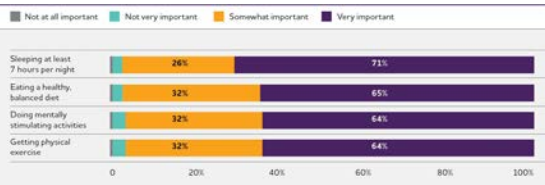


What Good Brain Health Means to Adults 40+

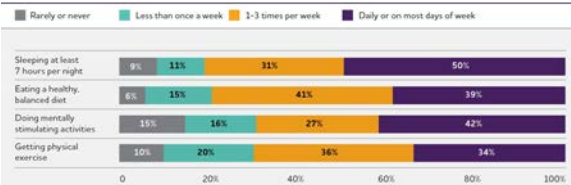




How Adults 40+ Rate the Importance of Healthy Habits for Brain Health



Adult Engagement in Brain-Healthy Behaviors



Key Takeaways from the 2026 Special Report

- Americans care about their brain health—but do not know where to turn for trusted guidance.
- There is a clear need for research-backed information that helps people take practical action.
- The Alzheimer's Association is committed to reaching all communities with this information, empowering individuals to make brain health a lifelong priority.
- This year's survey offers robust insights to help inform our future work.
- By connecting efforts across individuals, communities, workplaces and health care, we can build a more equitable framework to support cognitive health and help reduce dementia risk for all Americans.

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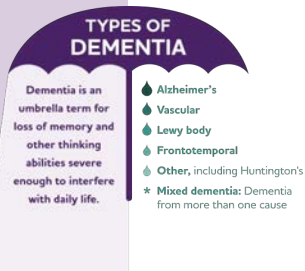
Recent Advances in Alzheimer's and Dementia Research



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What is Dementia?

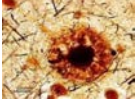
- Dementia is a collection of symptoms related to cognitive decline
- This can include
 - Cognitive symptoms
 - Behavioral symptoms
 - Psychological symptoms
- **Alzheimer's is the most common cause of dementia**
- Not everyone with cognitive decline has dementia. Some causes of cognitive decline are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



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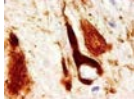
The Hallmarks of Alzheimer's

1 Plaques



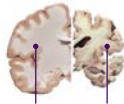
Made up of beta amyloid

2 Tangles



Made up of tau

3 Brain Cell Death

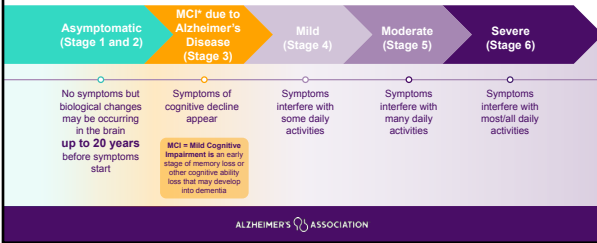


Healthy brain
Advanced Alzheimer's

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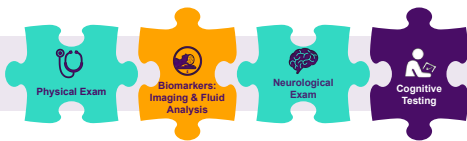
Alzheimer's Disease is a Continuum

Dementia due to Alzheimer's Disease



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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Benefits of an Early and Accurate Diagnosis

Medical Benefits

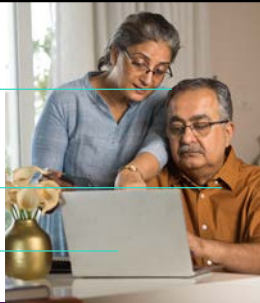
- Access to current treatments
- An opportunity to participate in clinical trials
- A chance to prioritize health, including making lifestyle changes

Emotional and Social Benefits

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

Financial Benefits

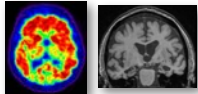
- Cost savings for families
- Cost savings for the U.S. government



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Biomarkers

A New Frontier in Detection, Diagnosis and Research



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.



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

Blood tests can also be used to detect amyloid and tau in the blood. These tests are FDA approved for individuals with cognitive impairment.

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Lumipulse pTau217 / β -Amyloid 1-42 Plasma Ratio

LUMIPULSE BLOOD

The first blood test to diagnose Alzheimer's Disease cleared for use by the FDA!



Measures & calculates ratio of **two blood plasma proteins:**

- pTau217
- β -amyloid 1-42

For adult patients (55+ years old) exhibiting Alzheimer's symptoms.

Early detection of **amyloid plaques** is associated with AD

- up to 10 yrs ahead of symptoms

Only for people with Alzheimer's symptoms.

Being used in Specialty Care settings

As per the FDA, this test is only intended for use by specialists.

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Clinical Practice Guidelines in Development

A collaboration between the Alzheimer's Association, guideline panels of clinical and subject-matter experts, partner organizations, and patient representatives are working to build clinical guidance that distills the best available evidence and translates it into clear and actionable recommendations for clinical practice.

Blood-Based Biomarkers in specialty care

Can a BBM test be used as a **triaging test** for AD in the diagnostic work-up of patients with objective cognitive impairment in specialized care?

Can a BBM test be used as a **confirmatory test** for AD in specialty care settings?

Cognitive assessment tools for the detection of cognitive impairment in primary health care settings

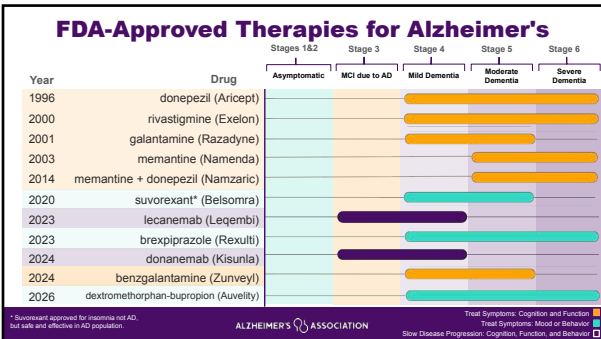
In English- and Spanish-speaking adults aged 55+ in primary care, **which brief test should be used** for the early detection of cognitive impairment (including MCI and dementia)?

Clinical tools
 Educational courses


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TREATMENT AND CARE


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Anti-Amyloid Monoclonal Antibodies




First treatments to address the underlying biology of Alzheimer's disease (Not a cure)




Targets and reduces amyloid plaques in the brains of individuals living with Alzheimer's disease

Treatment May be Appropriate for People With Both:



Mild cognitive impairment (MCI) due to Alzheimer's disease or mild dementia due to Alzheimer's disease

+



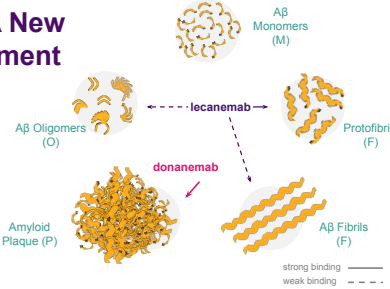
Evidence of a buildup of amyloid plaques in the brain

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Deeper Dive: A New Phase of Treatment

lecanemab (Leqembi)
Approved in 2023
Targets Beta Amyloid

donanemab (Kisunla)
Approved in 2024
Targets Beta Amyloid



strong binding ———
weak binding - - - - -


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How to Access Treatment

- Talk to your doctor to determine if you are a candidate for the treatment. You may be eligible if you have both:

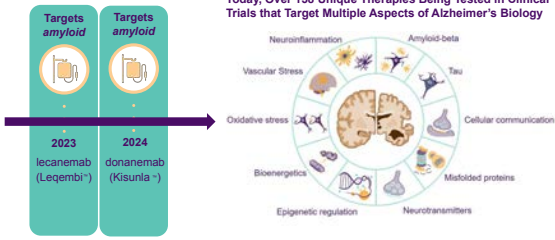
A diagnosis of MCI due to Alzheimer's or mild dementia due to Alzheimer's

Confirmation of amyloid plaques in the brain
- You may be referred to a specialist to determine if it is an appropriate treatment for you.



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A New Phase of Treatment



Today, Over 158 Unique Therapies Being Tested in Clinical Trials that Target Multiple Aspects of Alzheimer's Biology

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Cummings et al. Alzheimer's disease drug development pipeline: 2025. *Acta & Dementia*. TRCI

158 UNIQUE THERAPIES in 192 CLINICAL TRIALS for Alzheimer's disease as registered on clinicaltrials.gov

The 2026 pipeline has 10 more trials and 20 more drugs than the 2025 pipeline

Biomarkers play an important role in determining eligibility and outcomes of current trials

35% of candidate therapies are repurposed from other diseases

54,728 Participants needed to populate all currently active clinical trials



73%
disease targeted

18%
cognition enhancement

10%
behavioral and neuropsychiatric symptoms

Source: Cummings J, Zhou Y, Yang Y et al. Alzheimer's disease drug development pipeline: 2026. *Alzheimer's Demerit*. 2025. <https://doi.org/10.1007/s00133-025-02000-7>

TRAILBLAZER-ALZ 3 Prevention Trial in Alzheimer's



TESTING DONANEMAB

AGES 65-80, NORMAL COGNITION, PRESENCE OF AMYLOID AND TAU (STAGE 1/2)

ENROLLMENT COMPLETED GOAL = 2,196

PARTICIPATION COULD BE UP TO 186 WEEKS AND UP TO 17 CLINIC VISITS

OUTCOME IS TIME TO EVENT AND COULD BE ANY TIME (AS EARLY AS 2026)

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What could this mean for treatment and care?

POSITIVE READ OUT ASSUMPTIONS

ASSUMPTION 1

Side effects in early stages of disease are minimal.

ASSUMPTION 2

Treatment in stage 1+2 of disease is possible. Prevention of Stage 3

ASSUMPTION 3

Access to early detection (before clinical symptoms) is required.

ASSUMPTION 4

Size of population who may benefit will increase.

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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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*Over 370,000 users and includes 863+ clinical studies around the world.

Experimental /
Clinical Trials

Observational
Studies

Online Surveys

Interviews /
Focus Groups

*as of October 2024

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ALZHEIMER'S NETWORK

Launched in 2021 in the United States: Alzheimer's Network for Treatment and Diagnostics (ALZ-NET)

A voluntary health care provider-enrolled patient network that collects longitudinal data on patients being evaluated or treated for Alzheimer's disease.

Enrolling patients being evaluated for or treated with novel Alzheimer's treatments approved by the FDA in 2021 or after.

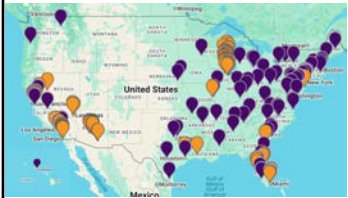
Implemented in real-world clinical practice, ALZ-NET is not a clinical trial. Sites are providers who provide routine clinical care.

Designed to work collaboratively with other studies including those conducted by academia, industry, federal agencies, and other international teams

For more information visit alz-net.org

ALZHEIMER'S NETWORK

ALZ-NET continues to grow, enrolling, activating and partnering with teams every day!



There are **4784 patients** enrolled with numbers increasing every day as patients consent to being included during their regularly scheduled care and treatment visits.

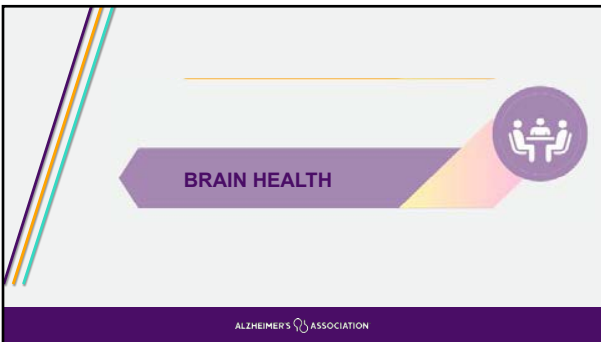
There are **130 clinical sites** activated across the United States

More than **155 additional clinical sites** are in various stages of startup

3 new sites likely to activate within the next few weeks

*As of Site & Patient Tracker 4/15/26

For more information visit alz-net.org

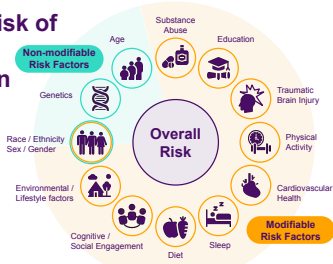


BRAIN HEALTH

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What May Impact Risk of Cognitive Decline or Dementia in Brain Health?

- Constellation of reasons may be fundamental and unique to everyone
- 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



Overall Risk

Non-modifiable Risk Factors: Age, Genetics, Race / Ethnicity / Sex / Gender

Modifiable Risk Factors: Substance Abuse, Education, Traumatic Brain Injury, Physical Activity, Cardiovascular Health, Sleep, Diet, Cognitive / Social Engagement, Environmental / Lifestyle factors

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What we set out to learn



The Growing Challenge

Dementia rates are rising, and prevention is more important than ever.



Early Findings

Studies targeting individual lifestyle factors have shown promising results.



Lifestyle and Risk

Risk in lifestyle factors, like poor nutrition and lack of physical activity, are linked to higher risk of cognitive decline.



A New Direction

Research has shifted to focus on whether combining multiple lifestyle changes can better protect brain health.



What we set out to learn



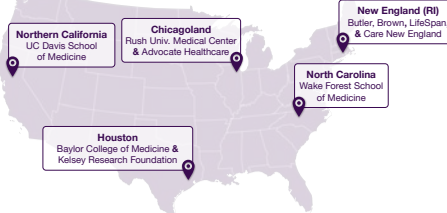
THE POINT OF POINTER

To understand whether lifestyle interventions can protect brain health and reduce risk of dementia in a large, diverse population of older adults in the United States—and whether varying levels of structure and support lead to different outcomes





- 5 SITES
- 2,111 PARTICIPANTS
- 2 SELF-GUIDED OR STRUCTURED
- 2 YEAR INTERVENTION



*The U.S. Study to Protect Brain Health Through Lifestyle Intervention to Reduce Risk



What we did

PARTICIPANT QUALIFICATION S

At Risk for Cognitive Decline, but Without Dementia

- 60 - 79 years old
- Does Not Exercise Regularly
- Suboptimal Diet (MIND Diet Score)

two or more of the following:

- 70 + years old
- African American / Black or Native American Race
- Hispanic Ethnicity
- Family History of Memory Impairment
- Cardiovascular Health Risk

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What we did

LIFESTYLE INTERVENTIONS

Participants Randomized into 2 Groups

Self-Guided (SG) | Intervention Components | Structured (STR)

Intervention Components: Physical Exercise, Cognitive & Social Activities, Nutrition, Health Monitoring

Differed in:

- Expectations
- Accountability
- Support

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Group Differences in Cognitive Function Over Time

The Structured intervention had a significantly greater benefit on cognitive function

This extra benefit was the same regardless of sex, age, ApoE4 genotype, or heart health at the start of the study

Structured intervention may slow the cognitive aging clock by 1 to nearly 2 years compared to self-guided.

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THE U.S. POINTER BRAIN HEALTH RECIPE*

PHYSICAL EXERCISE
30–45 min. of moderate-to-vigorous aerobic activity four times a week, plus strength and flexibility exercises twice a week.

HEALTH MONITORING
Regular check-ins on blood pressure, weight, and lab results.

NUTRITION
Adherence to the MIND diet, which emphasizes leafy greens, berries, nuts, whole grains, olive oil and fish, and limits sugar and red/processed meat.

COGNITIVE EXERCISE
Computer-based brain training programs three times a week for 30 minutes, plus regular engagement in other intellectually challenging and social activities.

*Participants followed either a self-guided or structured Lifestyle program. The two interventions both focused on the same lifestyle domains, but differed in structure, accountability and support provided.

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Next Steps for US POINTER

- Continued analysis of the data (e.g. biomarkers and ancillary studies); ongoing economic analysis and more
- U.S. POINTER Alumni Extension Study, ongoing for 4 years of follow up; possibility to continue longer
- Collaborating with ~10 teams on planning grants to translate USP to community implementation and develop tools to support this implementation
- \$15M+ million RFP for implementation projects (coming soon)

U.S. POINTER is the first large-scale, randomized controlled clinical trial to show health benefits beyond targeting multiple risk factors and prevent cognitive function in diverse populations in communities across the United States.

U.S. POINTER
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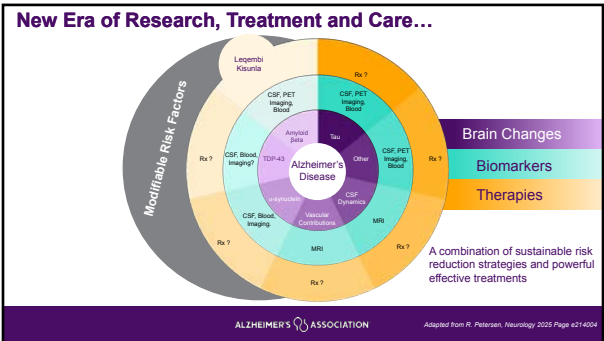
MAKE YOUR PLAN FOR A HEALTHY BRAIN.

The Alzheimer's Association® Brain Health Habit Builder is a free online tool to check your current habits and make a plan to help protect your brain.

- » Answer a few brief questions.
- » Get your personalized results and tips based on your answers.
- » Create and save your action plan.

Visit alz.org/habitbuilder and start building your brain-healthy habits today.

ALZHEIMER'S ASSOCIATION | Brain Health Habit Builder



Future of Treatment

Precision and Personalized Medicine

A New Era of Treatment

Precision and personalized medicine approaches to Alzheimer's and other dementia.

The science is not there yet, but it holds *promise for the future.*

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Alzheimer's Association Initiatives & How You Can Get Involved

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World's Largest Nonprofit Funder of Alzheimer's & All Dementia Research

\$490M+ currently active

1220+ projects

59 countries

SEED new ideas

SPEED the development of new therapies

SCALE to accelerate the science

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

7x Increase Since the Passage of the Alzheimer's Accountability Act

\$3.8B Annually

2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026

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Research Resources

Association's Website | alz.org

Research at the Association | alz.org/research

Join a Clinical Trial | alz.org/trialmatch

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

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SAVE THE DATE



Be the first to know about the cutting-edge research announced at the Alzheimer's Association International Conference (AAIC) — the world's largest meeting on dementia science — at AAIC for All.

On July 16, 2026, participate in this unique opportunity to learn about the latest research directly from the world's leading dementia experts.

Registration opens in Spring 2026.



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AAIC >26 FOR ALL

In Summary...

- The Alzheimer's Association is the global leader for Alzheimer's and dementia science
- Exciting time in research
- New tools for detection and diagnosis
- New approved treatments and more in the pipeline
- Strategies for risk reduction
- There is **HOPE** in research




Care & Support


Advocacy


Education & Awareness


Research


Community Engagement

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Thank you!



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