

UNIVERSITY WOMEN'S CLUB

LECTURE LUNCHEON JANUARY 2023 HAPPY NEW YEAR!!!

\sim ANNOUNCEMENTS!!



2022 SCHOLARSHIP RECIPIENT SARAH CORONNA

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Today's Program

Kelly Ostoff

Senior Director of Programs at the Alzheimer's Association of Colorado



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

Kelly Osthoff - keosthoff@alz.org - (970)387-6120 Senior Director of Programs for Colorado & Research Champion Alzheimer's Association



S Our Work is About People and Science



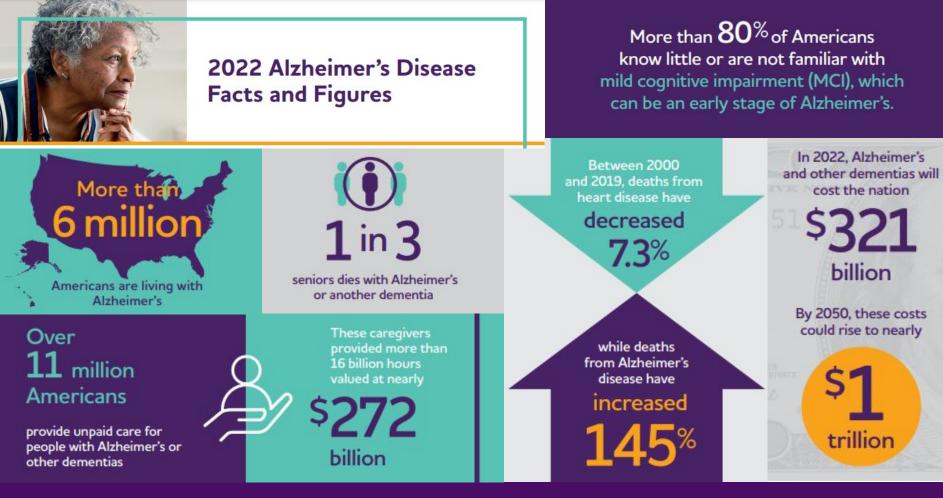
The Alzheimer's Association is a worldwide voluntary health organization dedicated to Alzheimer's care, support and research.

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.



- Landscape of Alzheimer's and Dementia Science
- Highlights in Early Detection and Diagnosis
- Latest Advances in Clinical Trials, Treatments and Lifestyle Interventions
- How You Can Get Involved

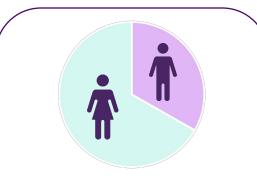




ALZHEIMER'S **C** ASSOCIATION

Facts and Figures 2022

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.



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



Dementia is a Syndrome

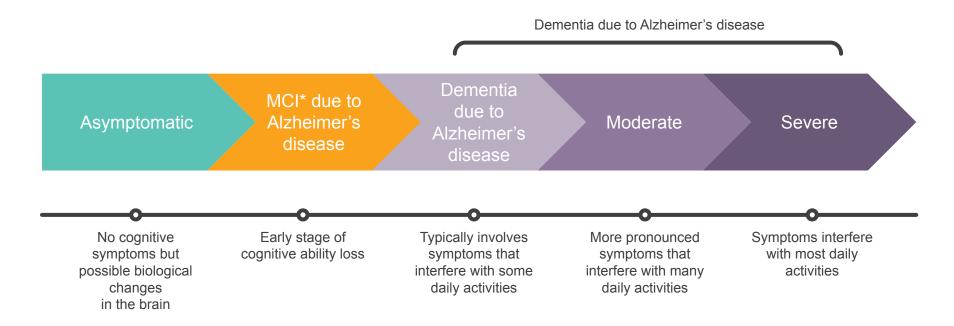
- Dementia is a collection of symptoms related to cognitive decline
- Can include cognitive, behavioral and psychological symptoms
- Due to biological changes in the brain
- Alzheimer's is most common cause
- Mixed dementia is very prevalent
- Some causes of cognitive decline are reversible and not truly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

Dementia An 'umbrella' term used to describe a range of symptoms associated with cognitive impairment										
Alzheimer's 60%-80%										
Vascular10%-40%	Lewy Bodies 10%-25% Frontotemporal ~10%									

Mixed Dementia = > 1 Neuropathology Prevalence \sim 50%



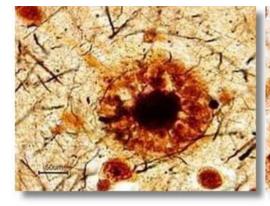
Alzheimer's Disease is a Continuum



*Mild cognitive impairment

Hallmarks of Alzheimer's Disease

Neuritic Plaques

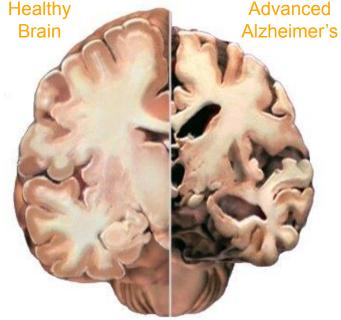


Extracellular deposits of **beta-amyloid**

Intracellular deposits of hyperphosphorylated **tau**

Neurofibrillary Tangles

Neurodegeneration Cortical Atrophy Advanced





What May Impact Risk of Cognitive Decline or Dementia



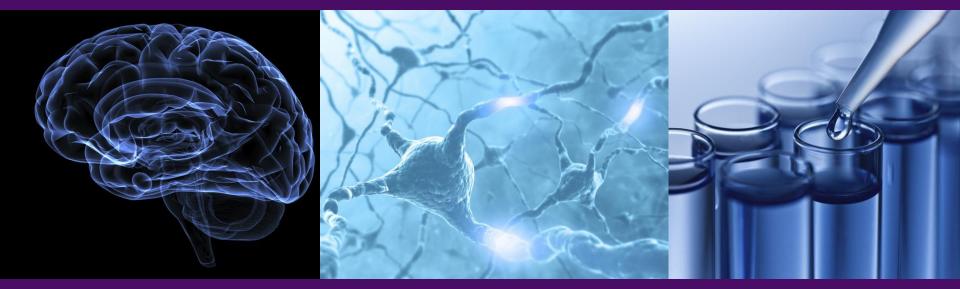
Constellation of reasons may be fundamental and unique to each individual

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





THE LARGEST NONPROFIT FUNDER OF ALZHEIMER'S & ALL DEMENTIA RESEARCH IN THE WORLD



million currently active



projects

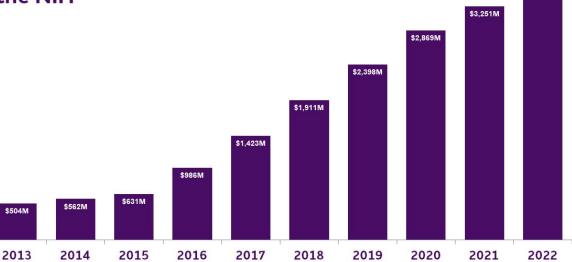


We Advocate



Following a \$289 million increase signed into law in March 2022, and added to current NIH spending, annual federal funding for Alzheimer's research will be more than **\$3.5 billion**.

Alzheimer's and Related Dementia Research Funding at the NIH



Source: NIH (<u>https://report.nih.gov/funding/categorical-spending</u>) with the 2022 figure reflecting NIH's estimated 2021 funding plus the additional increase of \$289M appropriated through the FY2022 omnibus.

ALZHEIMER'S RASSOCIATION



\$3.553N







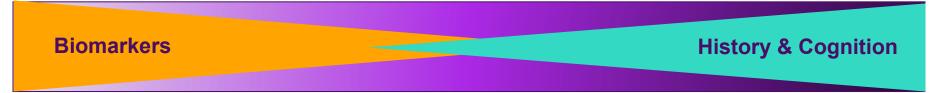
An early diagnosis can have emotional, social and medical benefits

- Understand symptoms
- Explore treatment options
- Improve health outcomes
- Prevent complications
- Make legal and financial decisions
- Access care services
- •Participate in clinical trials
- •Effectively manage the cost of care

Modernizing the Diagnosis

Cognitively Unimpaired

Alzheimer's Dementia





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

BIOMARKERS ARE CHANGING THE GAME

ACCELERATING THE SPEED OF RESEARCH

Brain Imaging

Biofluid Analysis

Emerging Markers

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?



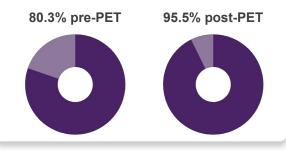
National study on utility of amyloid PET scans

- 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

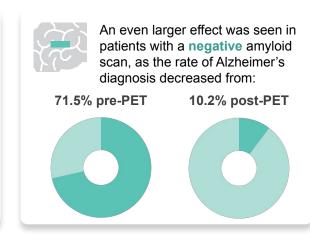


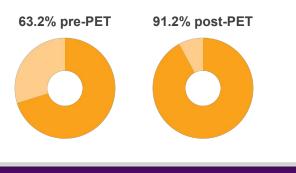
In patients with a **positive** amyloid scan, the rate of Alzheimer's diagnosis increased from:





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**.

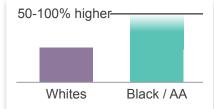


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ALZHEIMER'S

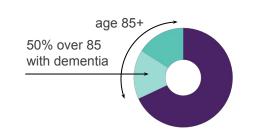


Information has not been gathered in these populations and have been grossly understudied by scientists





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



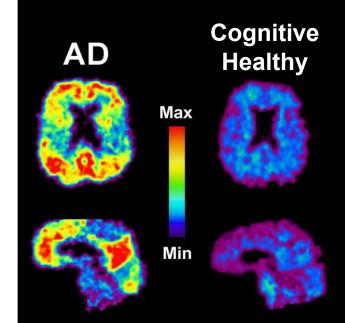
In 35 years, one-third of the U.S. population over the age of 85 will be Hispanic/Latino, Black/African American or other ethnoracial minority; if trends persist, > 50% of these individuals will suffer from dementia



Mayeda ER. A&D. 2016 NewIDEAS@acr.org IDEAS-Study.org

The Hunt for Biomarkers

- Biological marker to measure change
- Reliable predictor and indicator of disease and disease progression
 - Glucose for insulin resistance and diabetes
 - Cholesterol for heart disease
- Uses in Alzheimer's disease include:
 - **Diagnostic**: determining diagnosis
 - Enrichment: reinforcing entry criteria into a clinical trial
 - Prognostic: determining course of illness
 - **Predictive**: treatment outcomes and safety assessment



PiB PET SCANS



University of Pittsburgh PET Amyloid Imaging Group



Progress Toward a Blood Test

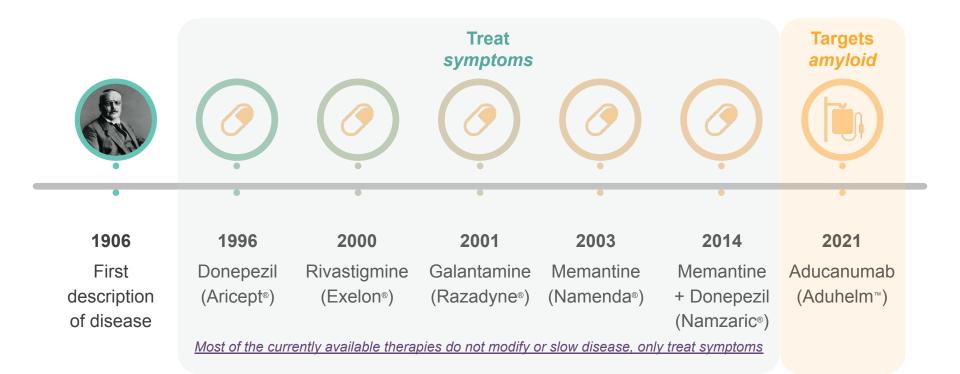
- Global race to uncover and develop blood based biomarkers for Alzheimer's and other dementia
- More research validating amyloid beta and tau in blood by comparing to imaging and cognitive testing
- New research on blood tests for alpha synuclein and neurofilament light and other markers
- AAIC 2021 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



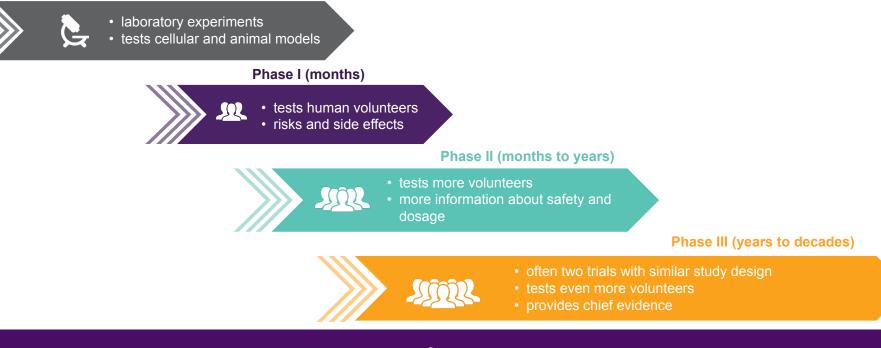
FDA-Approved Therapies for Alzheimer's (2022)



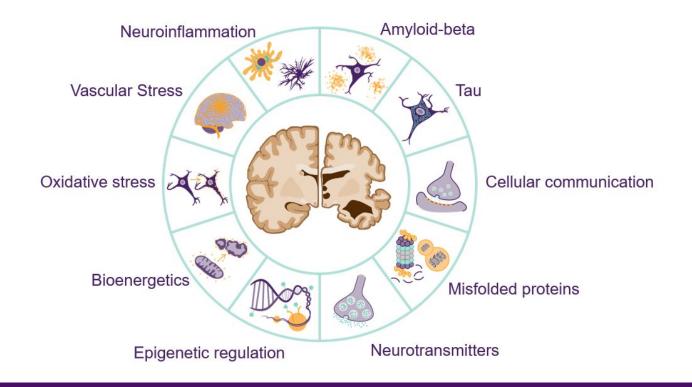


Feeding the Therapeutic Discovery Pipeline

Preclinical (years to decades)



Today, Over 100 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





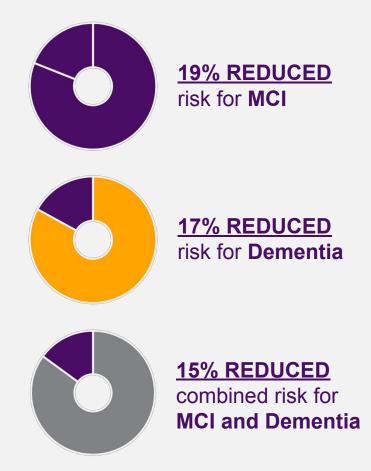
The Lancet 2020 Commission on Dementia Report

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 follow-up study SPRINT-MIND 2.0 to clarify impact on dementia risk





Ultra-Processed Food & Dementia Risk: What You Eat May Change Your Brain

20% Of caloric intake 28% Coord

Consuming more than 20% of daily caloric intake in ultra-processed food is associated with a 28% faster decline in global cognitive scores

Ultra-processed foods make up **more than 50% of American diets** – a troubling statistic given the effect on cognitive decline

Key Takeaway: It is never too late to incorporate one or two healthful actions into your lifestyle that may help protect against cognitive decline as you age

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 1500 Recruited
- Over 27% 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

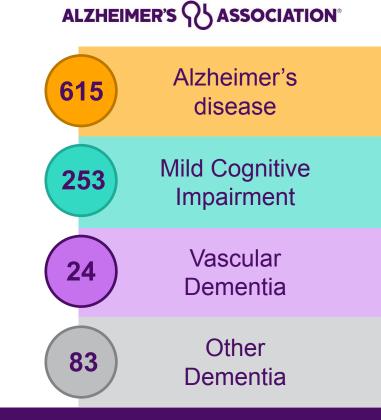
Over 370,000 Users

700+ Clinical Studies at Locations around the world

alz.org/trialmatch



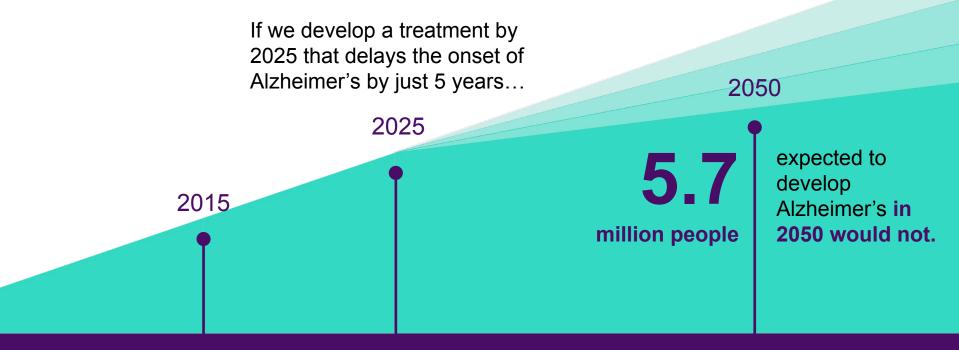
TrialMatch is a free **clinical studies matching service** designed to provide a **customized list** of potential study matches to each user.



trialmatch

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 R association





② SCIENCE HUB alzheimer's 役 association

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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.

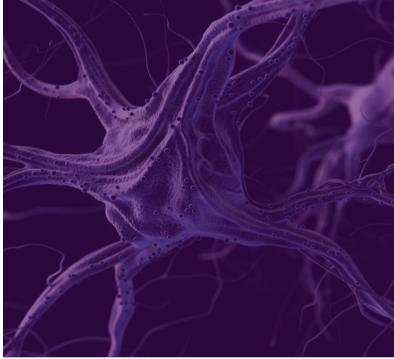
TODAY 1 day ago

ALZ Stats

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

Alzheimer's Association Research Resources





ALZHEIMER'S R ASSOCIATION

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.[™]









Join us Sunday, June 11, 2023

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heimer's Bassociation



Colorado Ride Overview

alz.org/ride



What is the #Ride2EndALZ?

#Ride2EndALZ is not just a bike ride.

We ride to honor & remember loved ones with Alzheimer's and all other dementias.

Fueled by science, and driven by determination, <u>100% of fundraising</u> for the Ride to End ALZ goes to Alzheimer's research.

\$500 fundraising minimum for a premium experience and a ride jersey, plus so much more.

alz.org/ride



Colorado Ride Details | Sunday, June 11, 2023





Colorado State University

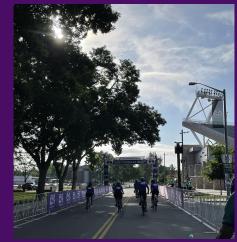
Join us at approximately 7 a.m. at Canvas Stadium on the CSU campus for the start and finish of the event.

Plan to ride one of four routes and then come back to a great party with live music while also enjoying a cold beverage and fully catered lunch in the New Belgium Porch at the stadium. The party is on until 4 p.m.









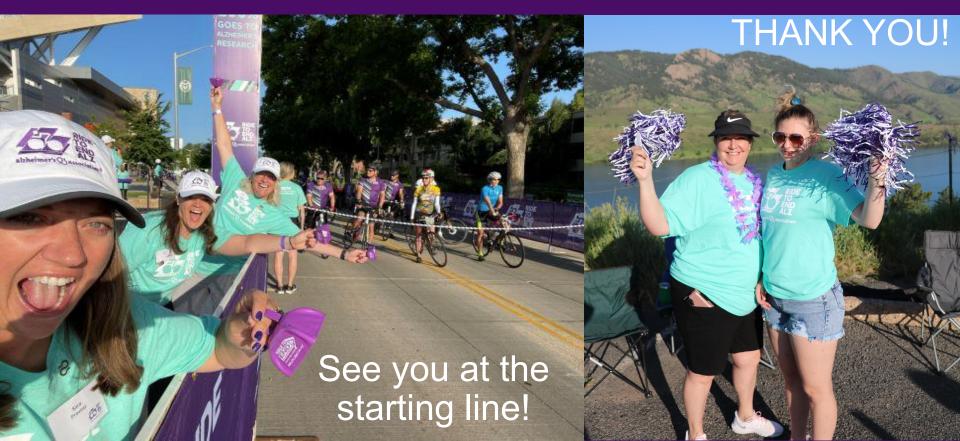


Colorado Route Options

- ✓ 15-20 Mile
 ✓ 44 Mile
 ✓ 60 Mile
- 🖌 100 Mile



Questions? alz.org/ride or Ride@alz.org



COLORADO CHAPTER 2022 COLORADO CHAPTER Walk to End Alzheimer's Results

- 13 of Walks
- 1125 of Teams
- 7100 of Participants
- \$360,000 Total Sponsorship
- \$1,975,000 Total Revenue





2022 Walk to End Alzheimer's –

• 111 of Teams

- 750 of Participants
- \$234,700 Total Revenue
- \$47,000 Total Sponsorship Revenue











