

Alzheimer's Disease and Dementia: Diagnosis, Treatment and Risk Reduction

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OUR TIME TODAY

- Difference between Alzheimer's disease and dementia
- Risk factors and risk reduction for Alzheimer's and other dementia
- Warning signs for Alzheimer's disease and steps to take when warning signs are present
- Treatment options (now and in the future) and support for families

OUR WORK IS ABOUT PEOPLE AND SCIENCE



The Alzheimer's Association is a global organization working to advance care, support and research across the world

FAST FACTS ON ALZHEIMER'S

Over **5 million** Americans are living with the disease (estimated 14 million by 2050).



Alzheimer's is the **6th leading cause of death** in the US (more than breast and prostate cancer combined).

Dementia currently costs the nation **\$290 billion** (rising as high as \$1.1 trillion in 2050).

More than **16 million Americans** provide unpaid care for people with Alzheimer's.

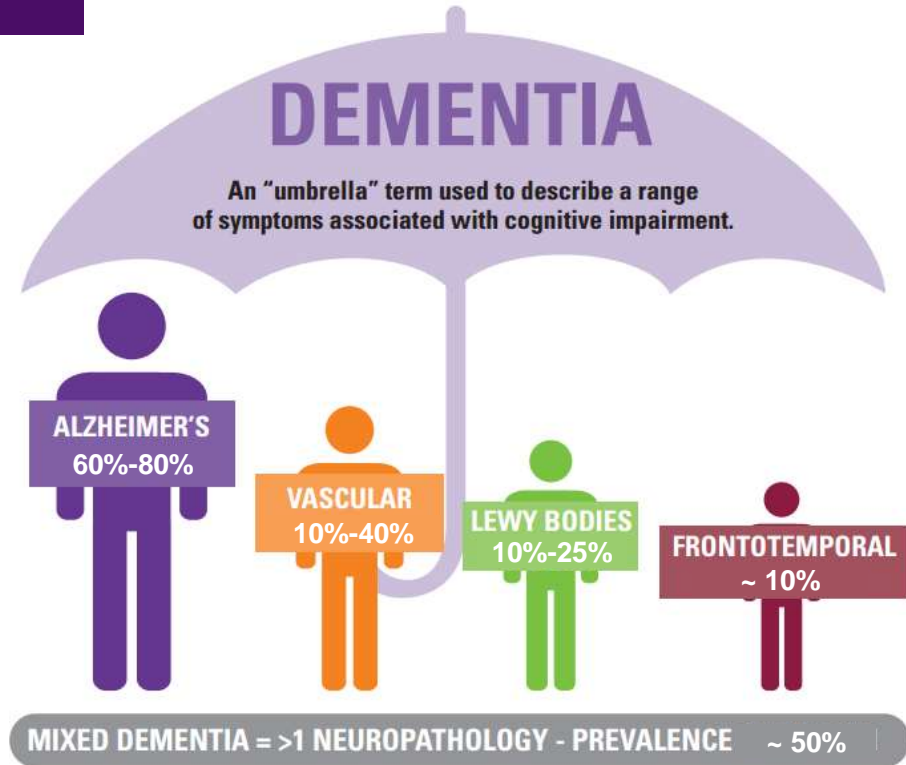
Alzheimer's Association (2019)

Alzheimer's disease and dementia

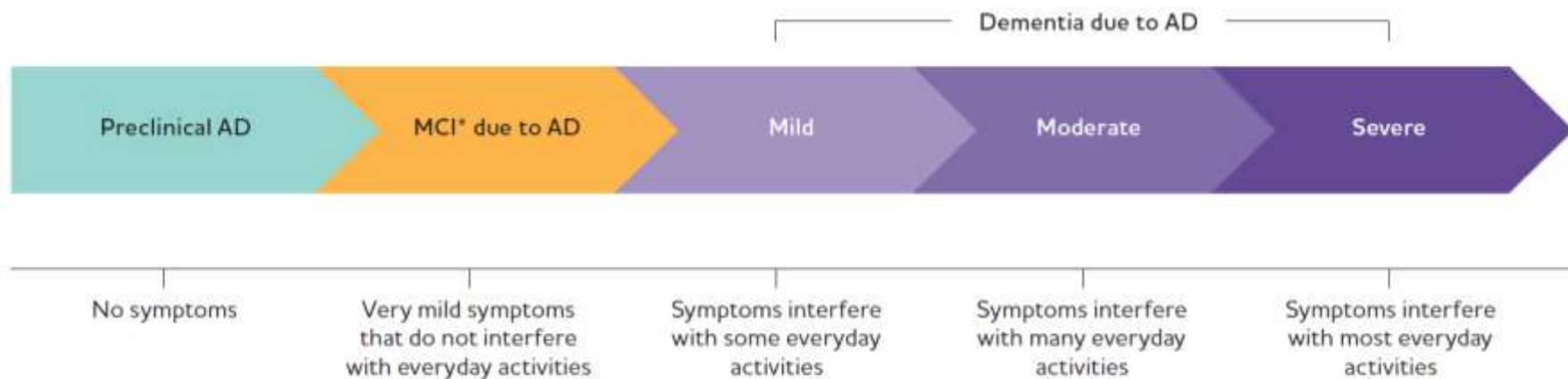
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DEMENTIA IS A SYNDROME

- 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



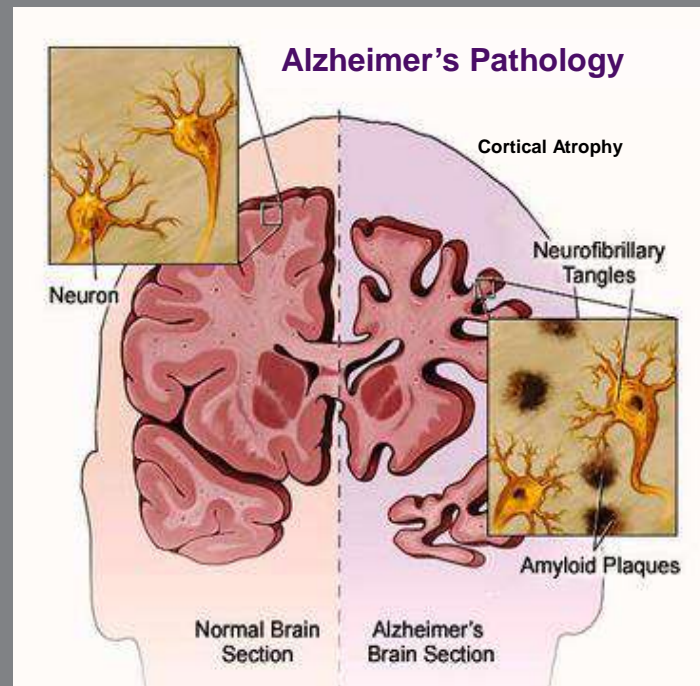
CONTINUUM OF COGNITIVE IMPAIRMENT



*Mild cognitive impairment

Not everyone with MCI goes on to develop Alzheimer's or other dementia.

HALLMARKS OF ALZHEIMER'S DISEASE



Risk factors and risk reduction

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WHAT MAY IMPACT RISK:

- Age
- Genetics
- Race / Ethnicity
- Environmental and Lifestyle Factors
- Cardiovascular Health
- Physical Activity
- Diet
- Sleep
- Social / Cognitive Engagement
- Education

RISK REDUCTION

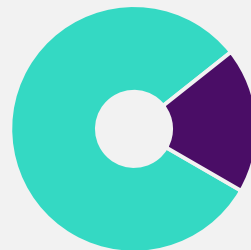
There is a growing scientific consensus, especially from a population perspective, that there are steps people can take to reduce their risk of cognitive decline including:

- Being physically active
- Being heart-healthy
- Quitting smoking
- Healthy diet
- Rigorous cognitive activities

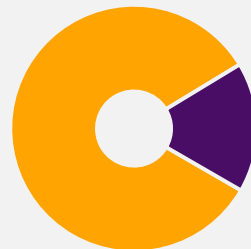
THE SPRINT-MIND STUDY

First Study to Demonstrate Reduction of New Cases of Cognitive Impairment

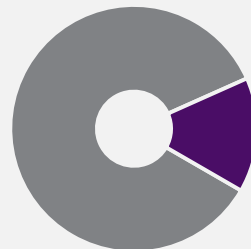
- 9,000+ people, Over age 50, All-cause dementia risk
- Standard vs. Intensive Blood Pressure Intervention
- Intensive treatment 120 systolic vs. 140 systolic
- Dramatic reduction of small vessel disease on **MRI**



19% REDUCED
risk for **MCI**



17% REDUCED
risk for **Dementia**



15% REDUCED
combined risk for
MCI and Dementia

Diagnosis of Alzheimer's

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WARNING SIGNS FOR ALZHEIMER'S

**Memory changes that
disrupt daily life**

**Challenges in planning or
solving problems**

**Difficulty completing
familiar tasks**

**Confusion with time
or place**

**Trouble understanding
images and
spatial relationships**

6

**New problems with words
in speaking or writing**

7

**Misplacing things and losing
the ability to retrace steps**

8

**Decreased or
poor judgment**

9

**Withdrawal from work or
social activities**

10

**Changes in mood
or personality**

CHOOSING A DOCTOR



- Primary care physician
- Specialists:
 - Geriatrician
 - Neurologist
 - Neuropsychologist
 - Geriatric psychiatrist
- Dementia diagnostic centers

GETTING A DIAGNOSIS

There is no single test for Alzheimer's disease.

- Medical history
- Physical exam and diagnostic tests
- Neurological exam
- Mental status tests
- Brain imaging

For a list of neurologists or diagnostic clinics, visit [Community Resource Finder](#).

Be prepared for the doctor to ask:

What kind of symptoms have you noticed?

When did they begin?

How often do they happen?

Have they gotten worse?

CASE STUDY



Mary is 85 years old and lives alone in her apartment. Before the COVID-19 outbreak, her daughter had been concerned that Mary was missing appointments and was not as interested in going to the Senior Center with her friends. She has noticed that Mary does not seem to have much to say on the phone and has not been able to use her computer to attend Zoom meetings with family. Mary is also insisting on going to the grocery store daily for the food she needs.

CASE STUDY DISCUSSION

- What concerns do you have about Mary?
- How would you suggest that the daughter approach these concerns with Mary?
- What ideas do you have for dealing with concerns of her current situation?

ACCEPTING THE DIAGNOSIS

Learning that a loved one has been diagnosed with Alzheimer's disease or other dementia is life changing.

- Allowing time for feelings of fear, denial and grief
- Importance of education, information and communication
- Sharing the diagnosis with others

Only 45% of people with dementia or their caregivers are told of their diagnosis by physicians.

Adapted from Reisa Sperling, BWH, MGH

CASE STUDY DISCUSSION



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Joe is 70 years old and was recently diagnosed with Alzheimer's disease after having short-term memory problems for the past few years. Joe and Mary have been married for almost 50 years and have a large extended family who lives close by. Since their appointment with the neurologist, Mary has tried to have a conversation with Joe about his feelings, but he tries to avoid the subject and says, "There's nothing to be done so there's nothing to talk about." Mary's children are worried that she is tearful every time they

CASE STUDY DISCUSSION

- How would you respond to Mary if she came to you with these concerns?
- What do you think might be behind Joe's reaction?
- What other questions would you have for Mary to get a better understanding his Joe's reaction and to give her advice?

MAINTAINING A SENSE OF PURPOSE

- Encourage the person to stay involved in activities he or she enjoys.
- Consider activities you can do together.
- Work together to identify opportunities at home or in the community that can leverage his or her strengths and interests.
- Discuss what new activities the person may be interested in trying.
- Encourage the individual to get connected with others who are living with the disease

FINDING SUPPORT

- Family and friends
- Community programs
- Alzheimer's Association
 - 24/7 Helpline
 - Support groups
 - Education programs
 - Alz Meet Ups

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Treatments for Alzheimer's: Now and in the future

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AVAILABLE THERAPIES

FDA Approved Therapies for Alzheimer's

Cholinesterase Inhibitors

donepezil (Aricept)

All Stages

rivastigmine (Exelon)

Mild – Moderate Stage

galantamine (Razadyne)

Mild – Moderate Stage

Glutamate Moderators

memantine (Namenda)

Moderate – Severe Stage

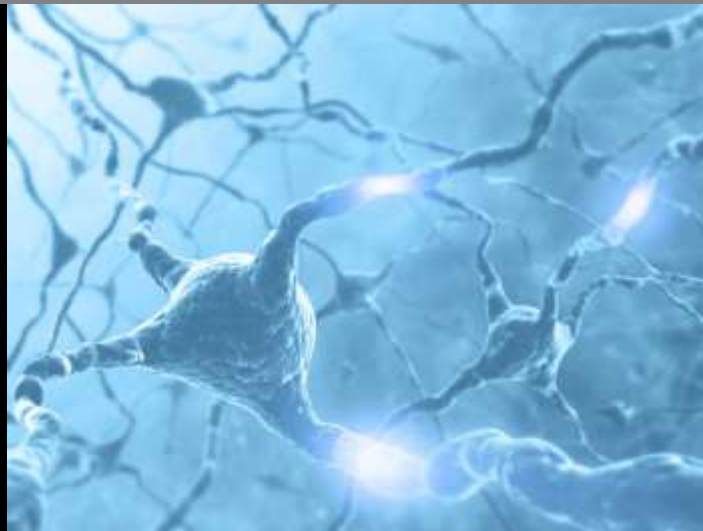
Combination

donepezil + memantine
(Namzaric)

Moderate – Severe Stage

- Currently, there are no therapies that can cure Alzheimer's
- Some drugs are available to temporarily improve symptoms
- The field is making great progress in developing new and better therapies

EXCITING TIME IN RESEARCH

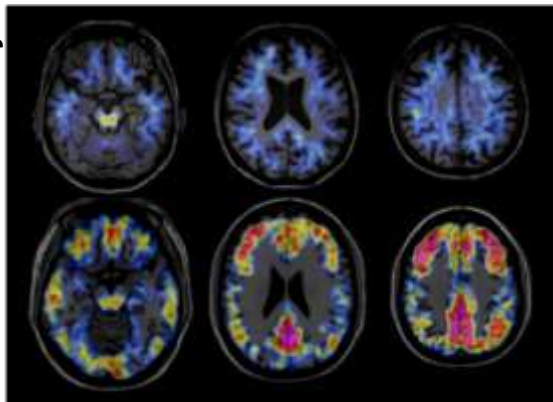


BIOMARKERS ARE CHANGING THE GAME

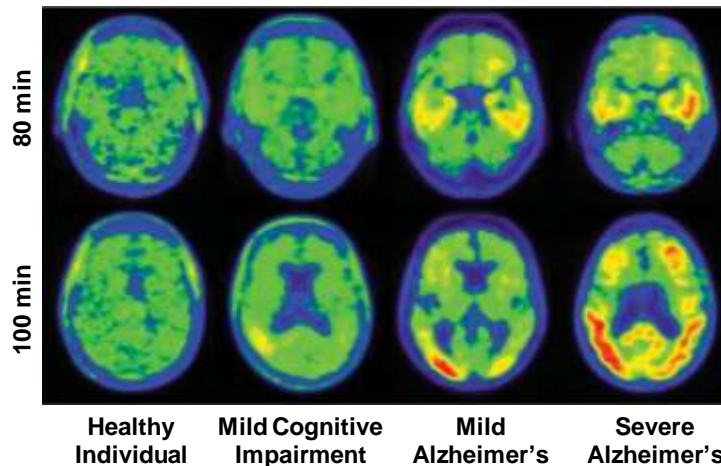
Saliva Biofluid



Amyloid- β PET Imaging



Tau PET Imaging



Retinal Imaging



Blood Test



CSF – Lumbar Puncture

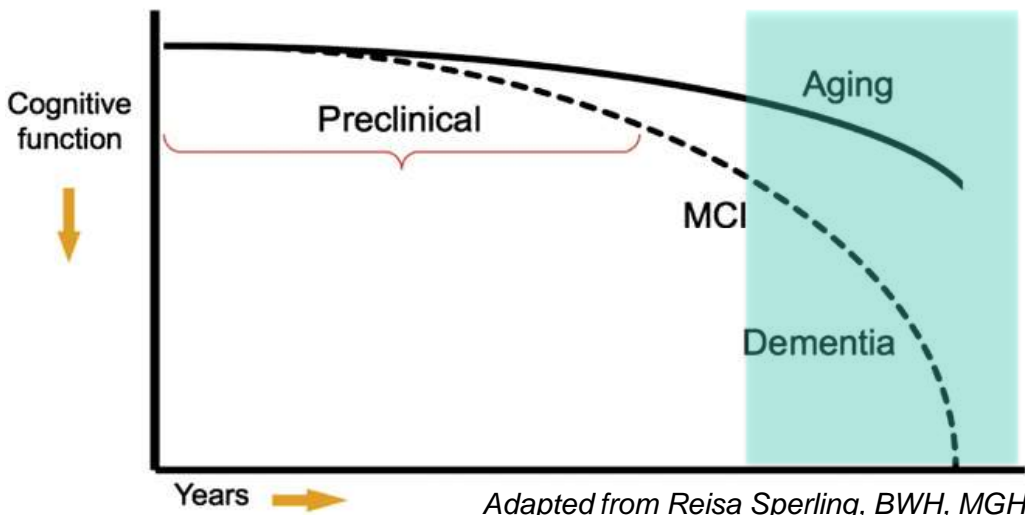


MODERNIZING THE DIAGNOSIS



Cognitively Unimpaired

Alzheimer's Dementia

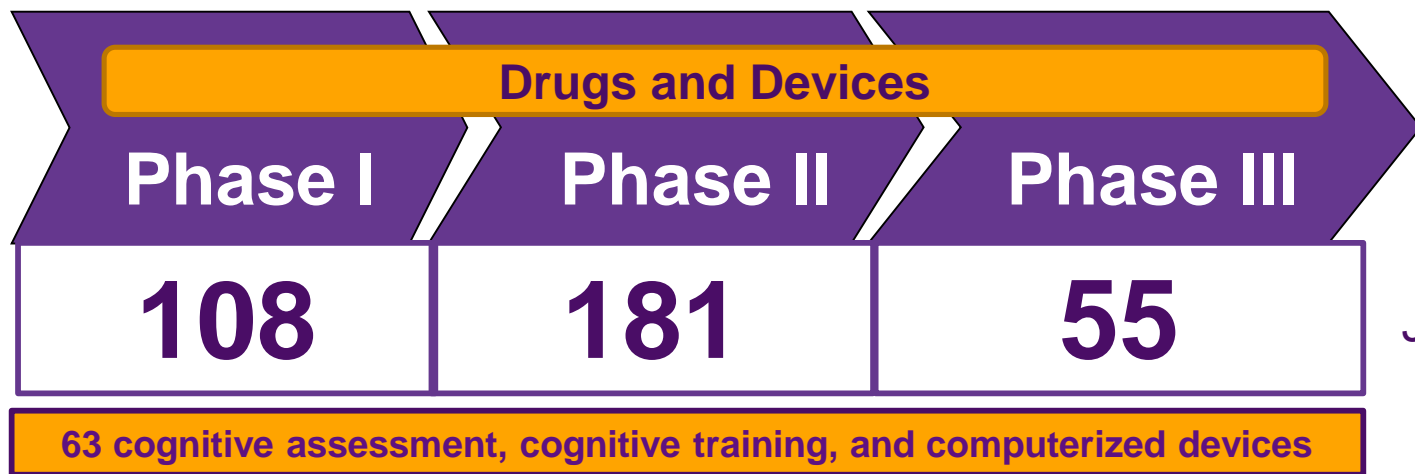


Adapted from Reisa Sperling, BWH, MGH

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

CURRENT LANDSCAPE OF CLINICAL TRIALS FOR ALZHEIMER'S AND ALL DEMENTIA



Always a Need for Participants

PROGRESS TOWARD MORE EFFECTIVE TREATMENTS

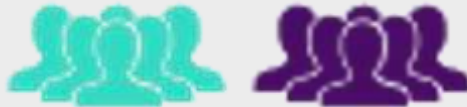


A future Alzheimer's therapy will likely include both lifestyle interventions and medicines

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



Two year multi-center randomized clinical trial



Self-Guided and **Structured** Lifestyle Groups

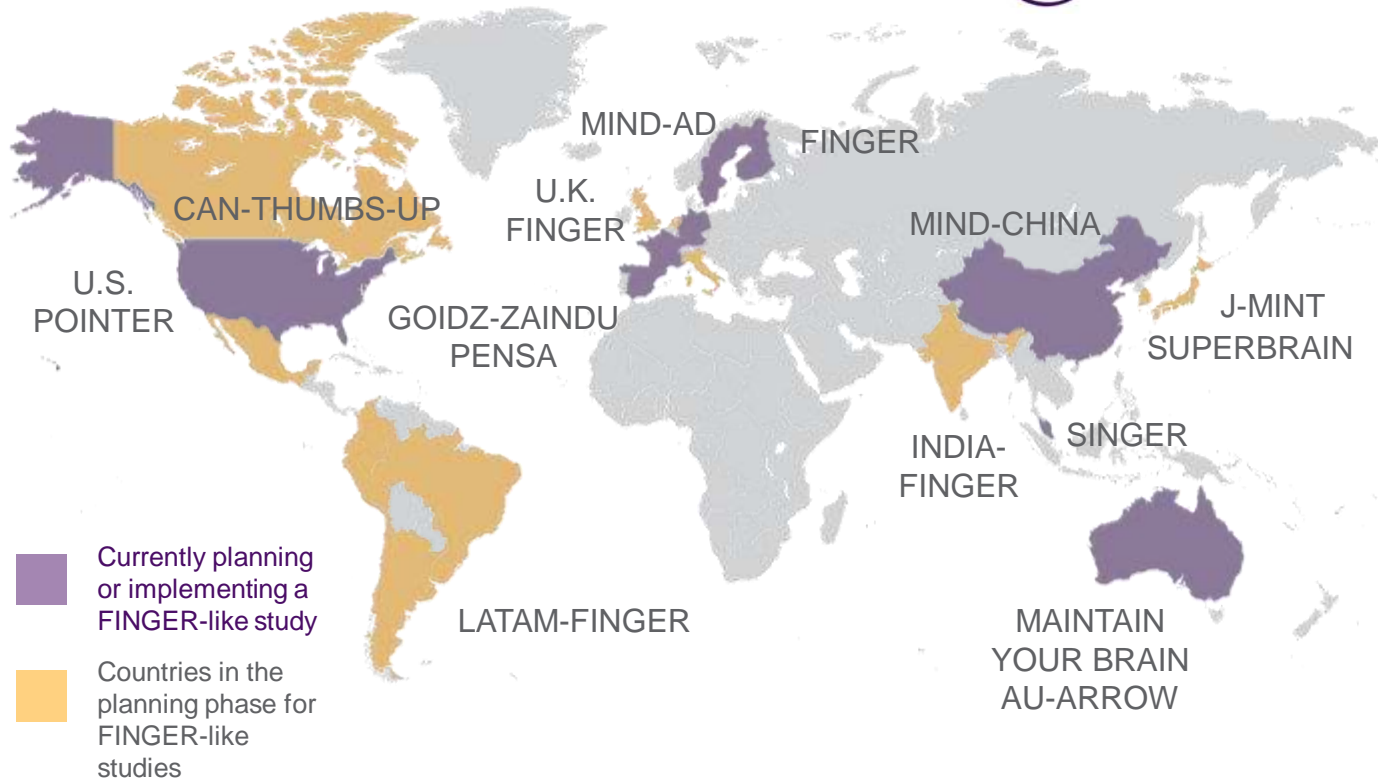


2,000 Participants at five U.S. sites, 60-79 years old, with suboptimal lifestyles

GLOBAL

U.S. POINTER ISN'T ALONE

World Wide FINGERS is a broad, international network sharing experiences, data, and planning joint efforts for the prevention of cognitive impairment & dementia worldwide.



MEDICINES FOCUSED ON BEHAVIORAL AND PSYCHOLOGICAL SYMPTOMS OF DEMENTIA

- A major quality of life problem for people living with dementia
- Must be tested in dementia population
- Ongoing clinical trials focusing on therapies for:
 - **Agitation** (aggression)
 - **Sleep disturbances** (insomnia / interrupted sleep disorders)
 - **Psychosis** (hallucinations / delusions)
 - **Apathy** (lack of appropriate emotional response)

IN SUMMARY...

- It is important to know the early warning signs of Alzheimer's disease and encourage early diagnosis.
- Early diagnosis provides medical and emotional benefits and time to plan.
- Recent medical advances are paving the way for more timely and accessible diagnosis and more effective treatments and risk reduction.
- You can make an important difference in the families with whom you work by connecting with valuable services, information and support!

A WORLD

WITHOUT

OUR VISION

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