

Dementia 101

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Objectives

1. Define Alzheimer's Disease and Related Dementias
2. Identify Dementia Behaviors
3. Managing Behaviors without Medication
4. Provide educational resources for self-learning



What Is Dementia or NCD?

Dementia or Neurocognitive Disorder(NCD), is NOT NORMAL in aging!

- Persistent symptoms and behaviors that interfere with normal social or occupational function
- No effective treatment
- May overlap with delirium, a treatable medical problem

Neurocognitive Disorders in DSM-5: Impairment Across 6 Key Domains

Domain	Symptoms
Complex attention	Ability to attend to and process multiple stimuli Eg) trail making
Executive function	Ability to plan, organize, and complete tasks/projects Eg) Verbal fluency; animals
Learning and memory	Acquiring, manipulating, and remembering items, facts, words and their meanings, events, people, procedures, skills, etc. E.g.) Recall, numbers
Perceptual-motor	Identification and manipulation of figures, maps and items; motor tasks; recognition of faces and colors Eg) Cube
Language	Expressive and receptive language skills
Social cognition	Socially appropriate behaviors and decision-making; empathy

Mild Cognitive Impairment (MCI)

- An Acquired condition that may affect only ONE higher brain function.
- Cognitive problems do NOT interfere with normal activities
- Earliest detectable stage of illness
- Mild Cognitive Impairment may NOT result in dementia

Figure - available from: [Journal of Molecular Neuroscience](#)

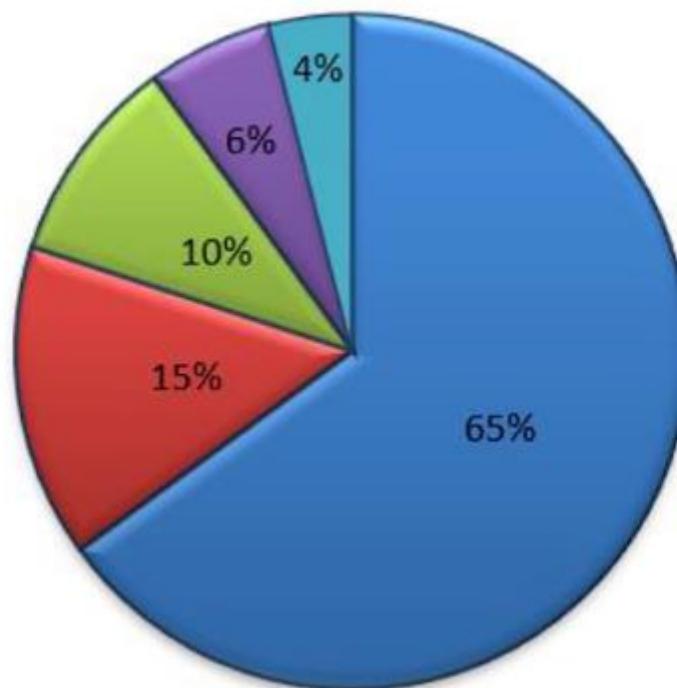
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TYPES OF DEMENTIA BY PERCENTAGE



■ Alzheimer's Disease

■ Vascular Dementia

■ Lewy body Dementia

■ Frontotemporal Dementia

■ Mixed

Graphical representation of types of dementia by percentage. Reference: Adopted from <http://seniorsfirstbc.ca/for-professionals/dementia/>

Dementia Symptoms

- Memory Loss
- Repetition of words, stories, phrases
- Loss of bowel and bladder function
- Inability to independently dress, groom, toilet, feed or manage finances or meals
- Gait instability- falls
- Personality Changes- belligerent, apathy
- Psychoses- paranoia

Dementia Behaviors

- Wandering
- Personality Changes- irritability
- Paranoia- fear, suspicion
- Hallucinations
- Unusual Spending/Buying
- Compulsive Behaviors
- Driving Difficulties-accidents, getting lost

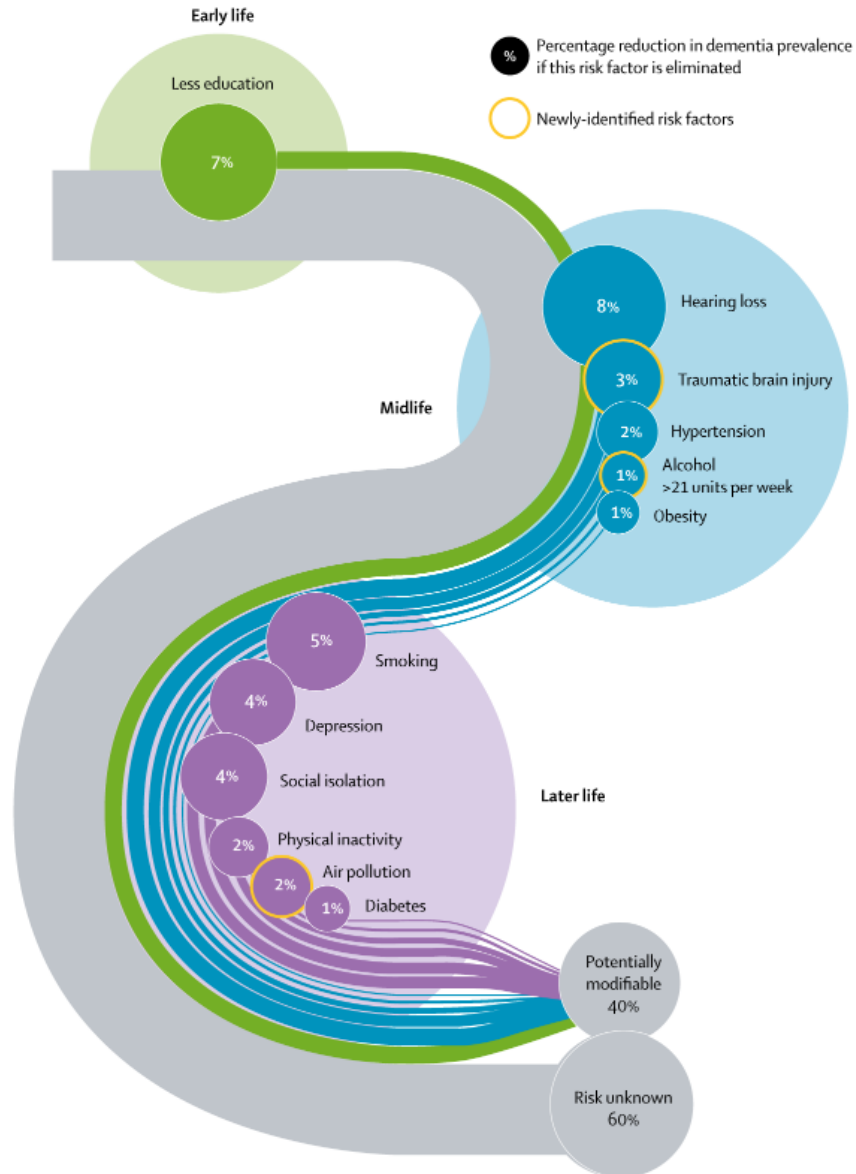


How do you Address Behaviors?

- See a Doctor!
 - A careful medical evaluation is required to look for treatable causes
 - Some behaviors may be normal and others may not
 - Other trained professionals- Social worker, elder care attorneys, occupational therapists may assist with familial, social and health problems

Risk factors for dementia

An update to the *Lancet* Commission on Dementia prevention, intervention, and care presents a life-course model showing that 12 potentially modifiable risk factors account for around 40% of worldwide dementias



Medications for Symptoms

- Cholinesterase inhibitors
 - Aricept –donepezil
 - Razadyne (galantamine)
 - Exelon(rivastigmine)
- NMDA Antagonists
 - Namenda- Memantine
- Antidepressants to manage mood/sleep
 - Zoloft, Citalopram, Lexapro, Trazodone, Mirtazepine
- Antipsychotics to manage psychosis
 - Risperdal; Seroquel; Geodon

Managing Dementia Behaviors

- Medications
- Non-Medication Strategies
 - Establish a daily routine of activity-groom, feed physical activity
 - Maintain a well lit, calm and clear environment
 - Minimize exposure to large crowds and unfamiliar people
 - Engage in enjoyable activities “fit” for the individual
 - Minimize loud noises

Non Pharmacologic therapies

● Activity Engagement

- Music therapy
- Reminiscence Therapy
- Exercise
- Multimedia devices

● Social Interaction

- Social engagement with partners or companions
 - Joint activities e.g. painting, walking, music

● Care Aid

- Educational and Counseling for patient and family

Music and Behavior

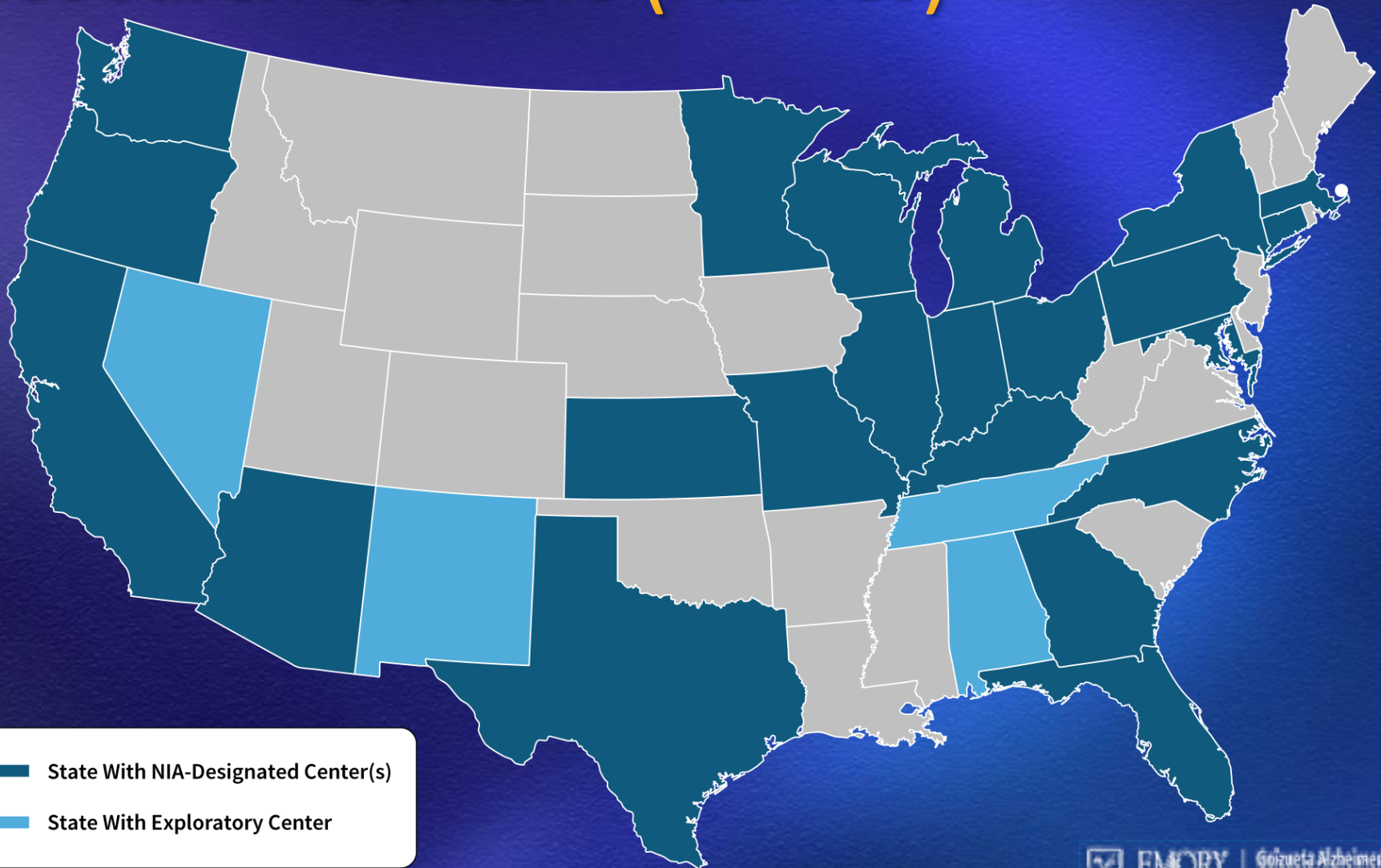
- Music- of their early adulthood- allows connection to something familiar and happy
- Familiar music may ease anxiety and agitation
 - Particularly useful in early evening to prevent sundowning
- Singing and dancing can aid with physical rehabilitation

Treatment

There is no known cure for neurodegenerative disease.



National Alzheimer's Disease Research Centers (ADRCs)



- State With NIA-Designated Center(s)
- State With Exploratory Center

Active NIA AD/ADRD Clinical Trials



Pharmacological Interventions

65
TRIALS



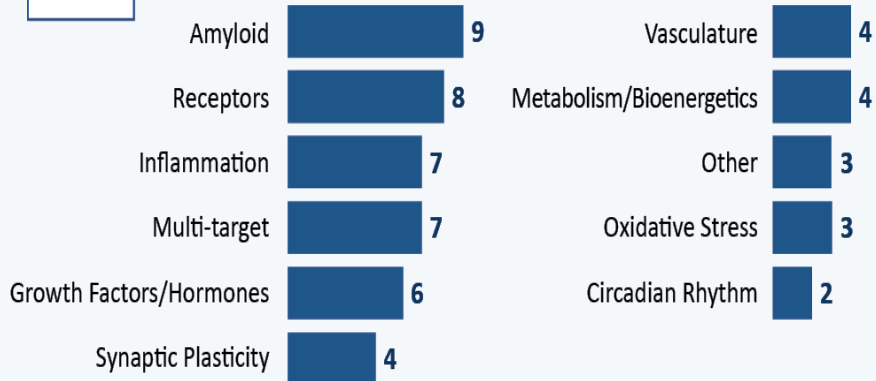
Non-Pharmacological Interventions

139
TRIALS

57
trials

Early Stage Trials (Phase I & Phase II)

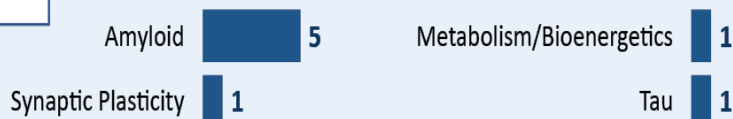
Targeted Disease Process



8
trials

Late Stage Trials (Phase II/III & Phase III)

Targeted Disease Process



Intervention Modality



For more information please visit
www.nia.nih.gov/research/ongoing-AD-trials





Dementia Care and Caregiving Interventions

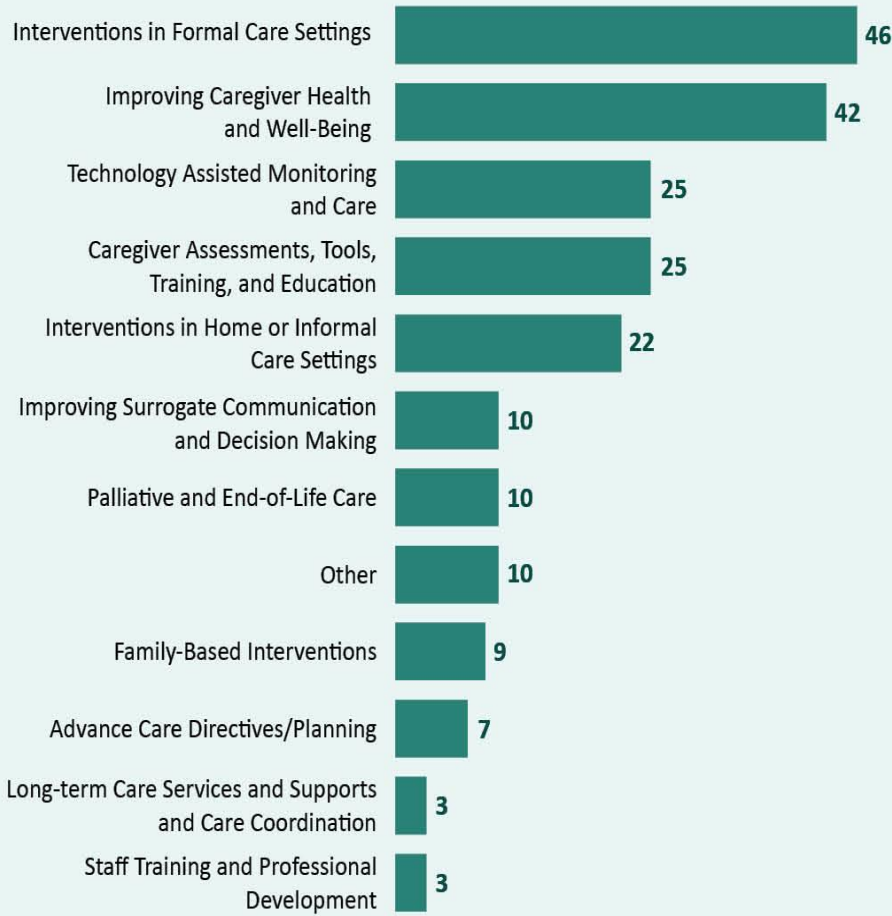
212
TRIALS



Other Trials

26
TRIALS

Intervention Type



Diagnostic Tools, Assessments & Imaging Studies

17

Treating Neuropsychiatric Symptoms of AD/ADRD

5

4

● Pharmacological

● Non-pharmacological



Total Number of Trials

442

For more information please visit
www.nia.nih.gov/research/ongoing-AD-trials



Data last updated: July 2022.

Inclusion in Clinical Research is Essential

- Eliminates health disparities
- Maintains the integrity of science and generalizability of medicine
- Upholds the principle of justice, a founding principle in the regulations surrounding human subjects research (Belmont Report)

Shavers, et al. (2002); Mouton et al (1997); Corbie-Smith et al. (1999); Wendler et al. (2006); Van Ryn et al. (2000)

Is **CLINICAL RESEARCH** right for me?

Clinical research is medical research that involves **people**.



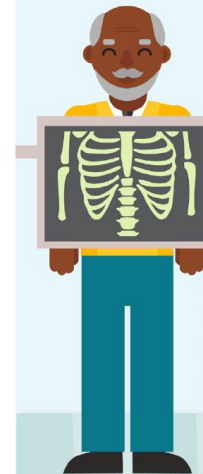
It's led to the **DISCOVERY** of every disease treatment prescribed today.

Study volunteers play a critical role in this process.

Are you interested in joining a study or trial?

CLINICAL RESEARCH may be right for you if you want to:

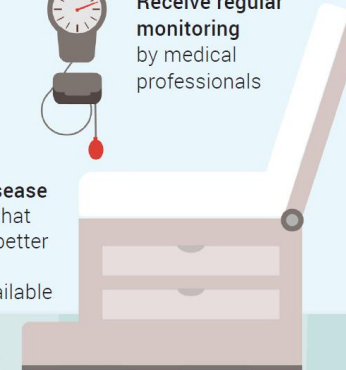
Help others, including future family members, who may be at risk for certain diseases



Test new disease treatments that might work better than those currently available



Receive regular monitoring by medical professionals



Be part of the **BREAKTHROUGH**.

Learn more about participating in research at www.nia.nih.gov/clinical-trials-and-older-people.



Summary

- Dementia behaviors can be managed without medication
- Establishing/following a daily routine for PLWD relieves anxiety. Routine includes grooming, feeding, physical activity and socialization
- Non medication therapies include music, reminiscence, physical exercise
- Research is ongoing by the NIH in caregiving, disease and therapeutics for ADRD.

Websites

- www.alzu.org Tutorial about the disease
- www.alz.org Resources for caregivers
- <http://www.alzheimers.emory.edu> Emory Alzheimer's Disease Research Center
- [Alzheimer's Disease and Related Dementias | National Institute on Aging \(nih.gov\)](http://www.alzheimers.emory.edu)