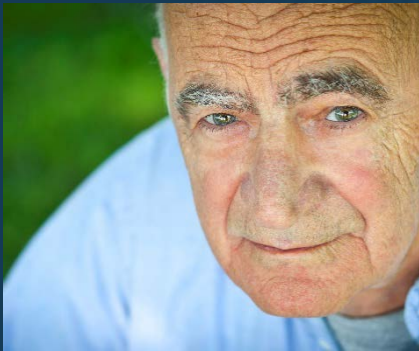


HEALTHY BRAIN INITIATIVE

RISK REDUCTION TO MAKE ALZHEIMER'S OUR NEXT PUBLIC HEALTH SUCCESS STORY

LISA C. MCGUIRE, PHD



Centers for Disease Control and Prevention

National Center for Chronic Disease Prevention and Health Promotion

Division of Population Health



Nothing to disclose

What is Brain Health?

- Brain health means making the most of the brain's capacity and helping to **reduce risks** that occur with aging.
- Brain health also means **strengthening** the brain's ability to remember, learn, play, and concentrate.



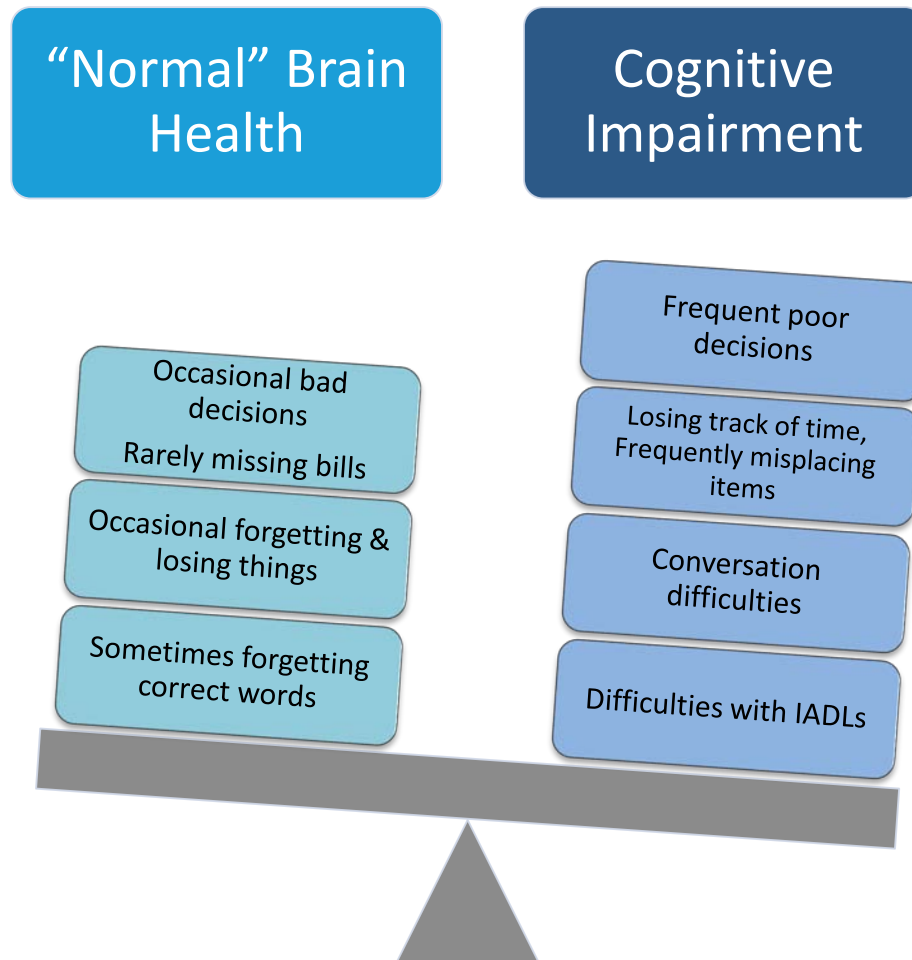
SOURCE: CDC HBI Public Health Road Map



**HEALTHYBRAIN
INITIATIVE**

State and Local Public Health Partnerships to Address Dementia: The 2018-2023 Road Map

***“Normal”* Brain Health vs. Cognitive Impairment**



SOURCE: IOM 2015; Blazer 2017

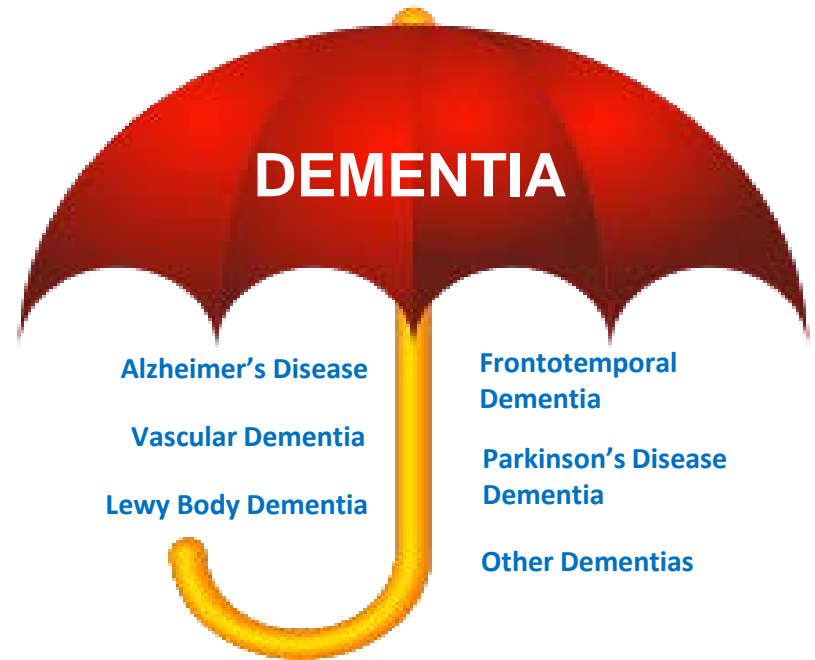


**HEALTHY BRAIN
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State and Local Public Health Partnerships to Address Dementia: The 2018-2023 Road Map

What is Dementia?

- Dementia is changes in the brain resulting in loss of cognitive function that interferes with daily life
- **Alzheimer's is the most common cause of dementia**
- Many (maybe majority) of cases have multiple causes



SOURCE: Alzheimer's Disease Facts and Figures, *Alzheimer's & Dementia* (2018)



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State and Local Public Health Partnerships to Address Dementia: The 2018-2023 Road Map



“Alzheimer’s is the most under-recognized threat to public health in the 21st century.”

*--Dr. David Satcher
Former Director, CDC
Former U.S. Surgeon General*

Satcher, The Hill (Nov. 14, 2014).

Scope of the Alzheimer's Epidemic (U.S.)

- More than 5 million adults
- 1 in 10 adults age ≥ 65
- 1 in 3 adults age ≥ 85
- 2/3 are women
- 70% live in a community setting, with 26% living alone
- 1 in 3 older adults dies with Alzheimer's or dementia



SOURCE: Alzheimer's Disease Facts and Figures, *Alzheimer's & Dementia* (2020)



LEADING CAUSES OF DEATH, US ADULTS 65+ YEARS, 2018

Rank	Cause of Death
1	Heart Disease
2	Cancer
3	Chronic Lower Respiratory Diseases
4	Cerebrovascular Diseases
5	Alzheimer Disease
6	Diabetes
7	Unintentional Injuries
8	Influenza and Pneumonia
9	Nephritis, Nephrotic Syndrome and Nephrosis
10	Parkinson's Disease

SOURCE: National Center for Health Statistics. Underlying Cause of Death 2018 - CDC WONDER Online Database (2020)

New Estimates of Americans with Alzheimer's Disease and Related Dementias Show Racial and Ethnic Disparities

Number of Americans with Alzheimer's Disease Expected to Increase

Percentage of Adults Aged 65 and Older with Alzheimer's Disease by Race and Ethnicity



Alzheimer's Disease Projected to Nearly Triple by 2060



296249A



www.cdc.gov/aging

Centers for Medicare and Medicaid Services, 2014

Census Population Projections Program, 2014 to 2060

SOURCE: Matthews, K. A., Xu, W., Gaglioti, A. H., Holt, J. B., Croft, J. B., Mack, D., & McGuire, L. C. (2018). Racial and ethnic estimates of Alzheimer's disease and related dementias in the United States (2015–2060) in adults aged ≥ 65 years. *Alzheimer's & Dementia*.

<https://doi.org/10.1016/j.jalz.2018.06.3063>



**HEALTHY BRAIN
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State and Local Public Health Partnerships to Address Dementia: The 2018-2023 Road Map



A Few More Facts

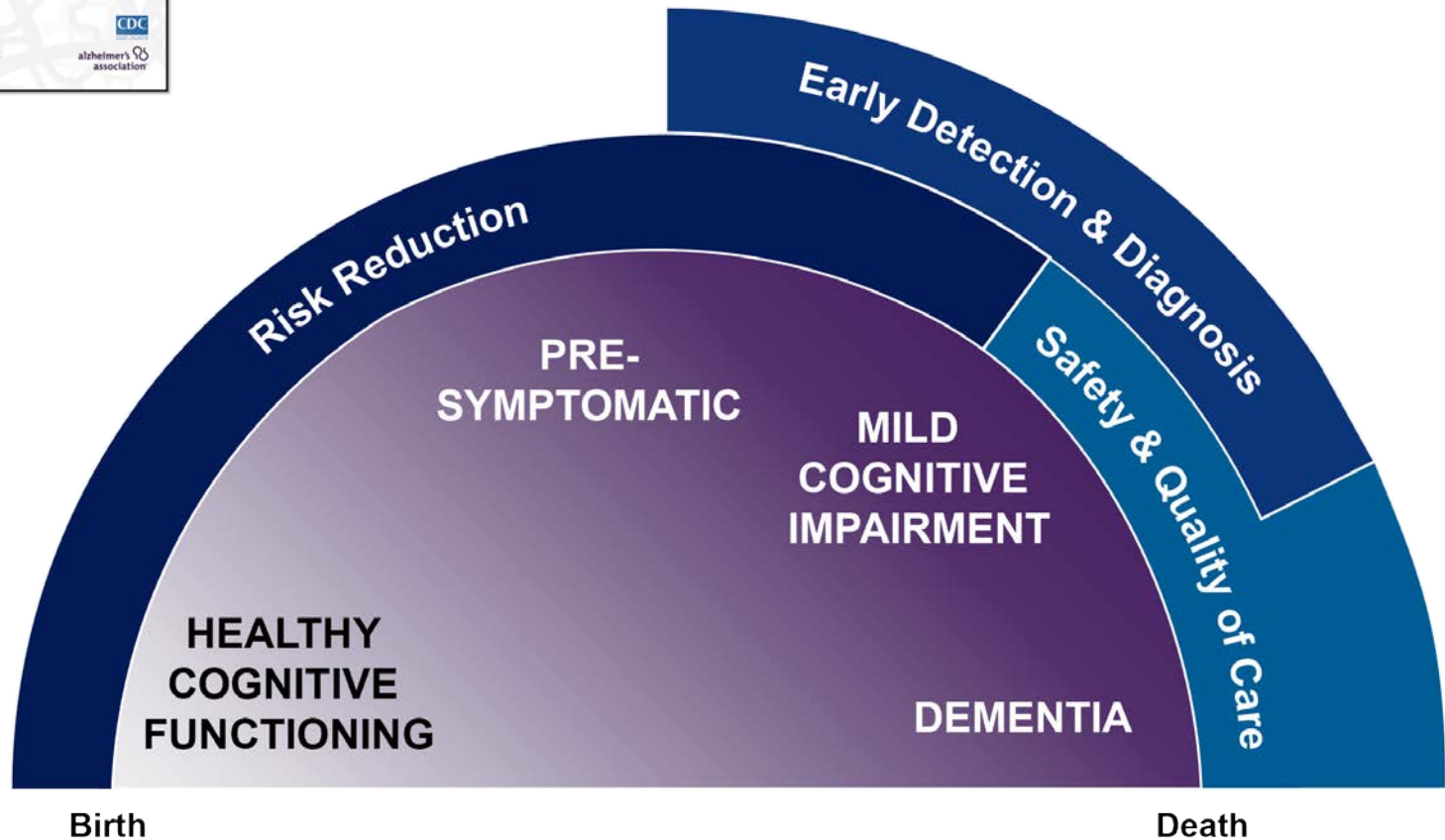
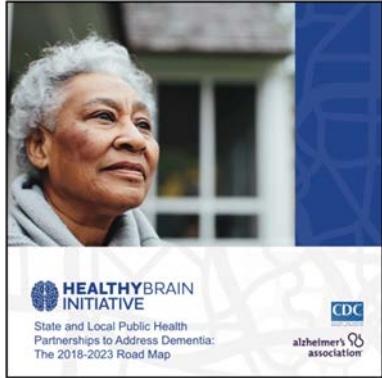
- 35% of people diagnosed with dementias, or their caregivers, aware of diagnosis
- About 25% of hospitalizations were preventable among older adults diagnosed with dementia
- 45% of people with Subjective Cognitive Decline discussed memory concerns with health care provider
- People with one or more chronic health condition are more likely to report worsening memory problems.
- About 1 in 3 caregivers for people with Alzheimer's report worsening health



Risk Reduction *A Public Health Niche*

- Public health can **increase awareness** about the connection between brain and physical health by **linking dementia and cognitive decline risk messaging to health promotion activities**

Dementia Life-Course Perspective and Public Health Roles



Modifiable Risk Factors

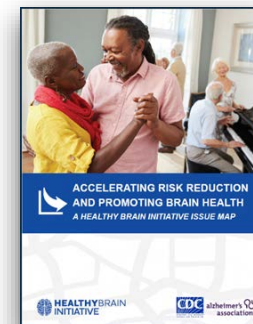
- Hypertension, especially mid-life
- High cholesterol
- Obesity
- Diabetes
- Commercial tobacco use
- Unhealthy diet
- Lack of physical activity/exercise



Alzheimer's Association 2019; IOM 2015; Leshner 2017; Livingston 2017

Risk Reduction

Inside the Issue Map



RISK REDUCTION to Make Alzheimer's Our Next Public Health Success Story

The course of Alzheimer's disease and other dementias should be viewed as a continuum across the life span that begins with healthy cognitive functioning. Over many years, physiological changes occur in the brain that are pre-symptomatic but eventually can result in mild cognitive impairment, when changes in memory or thinking become noticeable to persons affected, loved ones, colleagues, and friends. While a person with mild cognitive impairment is at greater risk of developing dementia, this is not inevitable.

There is growing scientific evidence that healthy behaviors, which have been shown to prevent cancer, diabetes, and cardiovascular disease, also may reduce risk for cognitive decline and possibly dementia.

A recent study further shows significant reductions in mild cognitive impairment through aggressive lowering of systolic blood pressure.¹

Public health has strengths and capacities to advance awareness about the interplay between brain health and physical health by linking dementia and cognitive decline risk messaging to health promotion activities in such areas as:

- » Tobacco prevention and control;
- » Blood pressure control;
- » Cardiovascular health management;
- » Diabetes prevention and management;
- » Obesity prevention and control; and
- » Injury prevention.

Sharing accurate information with consumers using culturally appropriate health communications techniques can reduce risk of cognitive decline and improve overall health and well-being. Potential partners include federally qualified health centers (FQHCs), Medicaid providers, non-profit hospitals, and health plans.

COMPELLING DATA

Nearly 6 million Americans are living with Alzheimer's disease. By 2050, this number is projected to reach nearly 14 million. Current projections indicate that the number of persons with Alzheimer's dementia will nearly triple in the next 35 years.²

Disparities in the risk of developing Alzheimer's and other dementias are most prominent among African Americans, Hispanics, and women. Variations in health, lifestyle, and socioeconomic likely account for most of this difference in risk.³

- » High blood pressure and diabetes, which are risk factors for dementia, are more prevalent in African American and Hispanic populations than in whites.⁴
- » Lower levels of education and greater levels of other socioeconomic characteristics and risk factors (such as poverty, adversity in early life, and access to quality care) among some racial and ethnic minorities may also contribute to increased risk.⁵
- » Almost two-thirds of older Americans with Alzheimer's dementia are women.⁶
- » At age 65, women without Alzheimer's have more than a one in five chance of developing Alzheimer's dementia during the remainder of their lives, compared with a one in nine chance for men.⁷



For the full HBI Road Map, data, ready-to-use resources, and case studies, visit: alz.org/publichealth and odc.gov/aging.

THE RISK REDUCTION ACTION AGENDA

The Healthy Brain Initiative's (HBI) State and Local Public Health Partnerships to Address Dementia, The 2018-2023 Road Map charts a course for state and local public health agencies and their partners to act quickly and strategically to prepare all communities by stimulating changes in policies, systems, and environments. Many of the Road Map's 25 expert-developed actions would accelerate risk reduction by promoting brain health.

EDUCATE & EMPOWER

E-1 Educate the public about brain health and cognitive aging, changes that should be discussed with a health professional, and benefits of early detection and diagnosis.

E-2 Integrate the best available evidence about brain health and cognitive decline risk factors into existing health communications that promote health and chronic condition management for people across the life span.

E-3 Increase messaging that emphasizes both the important role of caregivers in supporting people with dementia and the importance of maintaining caregivers' health and well-being.

E-4 Promote prevention of abuse, neglect, and exploitation of people with dementia.

E-7 Improve access to and use of evidence-informed interventions, services, and supports for people with dementia and their caregivers to enhance their health, well-being, and independence.

DEVELOP POLICIES & MOBILIZE PARTNERSHIPS

P-1 Promote the use of effective interventions and best practices to protect brain health, address cognitive impairment, and help meet the needs of caregivers for people with dementia.

P-5 Engage public and private partners in ongoing planning efforts to establish services and policies that promote supportive communities and workplaces for people with dementia and their caregivers.

ASSURE A COMPETENT WORKFORCE

W-1 Educate public health and healthcare professionals on sources of reliable information about brain health and ways to use the information to inform those they serve.

W-6 Educate healthcare professionals about the importance of treating co-morbidities, addressing injury risks, and attending to behavioral health needs among people at all stages of dementia.

MONITOR & EVALUATE

M-1 Implement the Behavioral Risk Factor Surveillance System (BRFSS) optional module for Cognitive Decline in 2019 or 2020, and the BRFSS optional module for Caregiving in 2021 or 2022.

M-3 Use data gleaned through available surveillance strategies and other sources to inform the public health program and policy response to cognitive health, impairment, and caregiving.

Brain health is a concept that involves making the most of the brain's capacity and helping to reduce some risks that occur with aging. Brain health refers to the ability to draw on the strengths of the brain to remember, learn, play, concentrate, and maintain a clear, active mind.

EXAMPLES OF PUBLIC HEALTH STRATEGIES TO ACCELERATE RISK REDUCTION

The following are examples of how public health departments are accelerating risk reduction.

NEW JERSEY

New Jersey Department of Health, Minority and Multicultural Health Center partnered with the Alzheimer's Association South Carolina Chapter, the American Heart Association, and Eat Smart Move More South Carolina on a multi-media campaign: Take Brain Health to Heart. The initiative was purposefully designed to reach rural and racial/ethnic minority populations that have a higher prevalence of cardiovascular risk factors that are also related to increased risk of cognitive decline and possibly dementia. Campaign elements included a new website, health education materials, social media messages, three radio PSAs, and an online pledge in which people commit to keeping their body, heart, and brain healthy.



SOUTH CAROLINA

South Carolina Department of Health and Environmental Control partnered with the Alzheimer's Association South Carolina Chapter, the American Heart Association, and Eat Smart Move More South Carolina on a multi-media campaign: Take Brain Health to Heart. The initiative was purposefully designed to reach rural and racial/ethnic minority populations that have a higher prevalence of cardiovascular risk factors that are also related to increased risk of cognitive decline and possibly dementia. Campaign elements included a new website, health education materials, social media messages, three radio PSAs, and an online pledge in which people commit to keeping their body, heart, and brain healthy.



NEW MEXICO

New Mexico Department of Health — with community partners — developed, produced, and distributed public service announcements (PSAs) based on the Alzheimer's Association's 10 Ways to Love Your Brain. Available as a single 60-second or two 30-second PSAs, the TV spots can be adapted by other agencies.



The full HBI Road Map, other examples of strategies used by state public health agencies, and additional resources are available at alz.org/publichealth and odc.gov/aging.

Data to guide your efforts can be found on your state's portal at alz.org/publichealth and odc.gov/aging and at the Centers for Disease Control and Prevention's Healthy Aging Data Portal at cdc.gov/aging.

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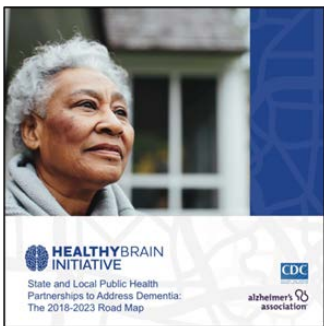
January 2019

<https://www.cdc.gov/aging/healthybrain/roadmap.htm>



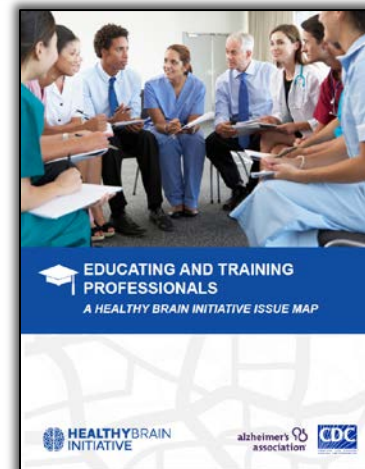
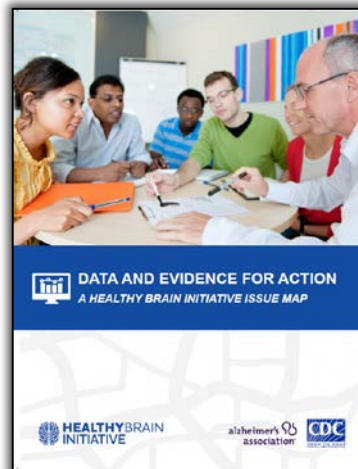
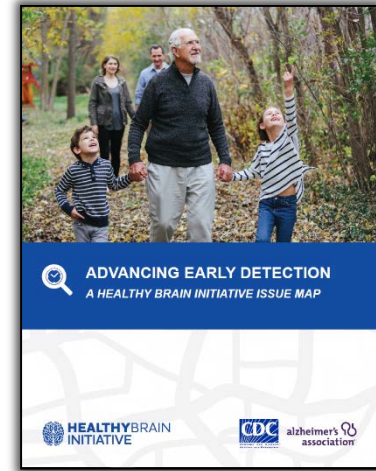
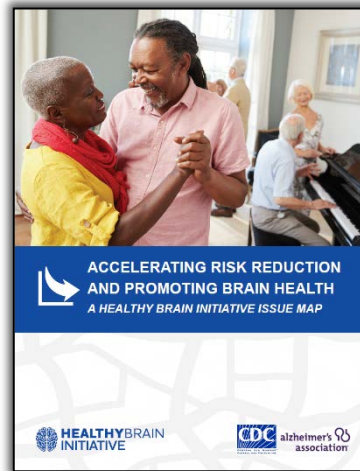
HEALTHY BRAIN INITIATIVE

State and Local Public Health Partnerships to Address Dementia: The 2018-2023 Road Map



HBI Issue Maps

Complete Series



[Issue Maps](#)



**HEALTHYBRAIN
INITIATIVE**

State and Local Public Health Partnerships to Address Dementia: The 2018-2023 Road Map

Continuing Education Course: Brain Health

Section 1

Descriptions & Risk Factors

Learning Outcomes:

- Explain-review brain health terminology
- Define and describe risk factors associated with age related cognitive decline, mild cognitive impairment, and dementia
- Summarize lifestyle medicine management strategies, including hypertension management, that may decrease risk

Section 2

Risk Reduction & Management I

Section 3

Risk Reduction & Management II

Continuing Education:

1.0 CME/MOC education activity is available through CDC's Alzheimer's Disease and Healthy Aging [Training Module](#).

Section 4

Resources & References

Cost:

Learners can create a free login account and take the course at no cost



American College of Preventive Medicine
physicians dedicated to prevention

[Brain Health Course](#)



**HEALTHYBRAIN
INITIATIVE**

State and Local Public Health Partnerships to Address Dementia: The 2018-2023 Road Map

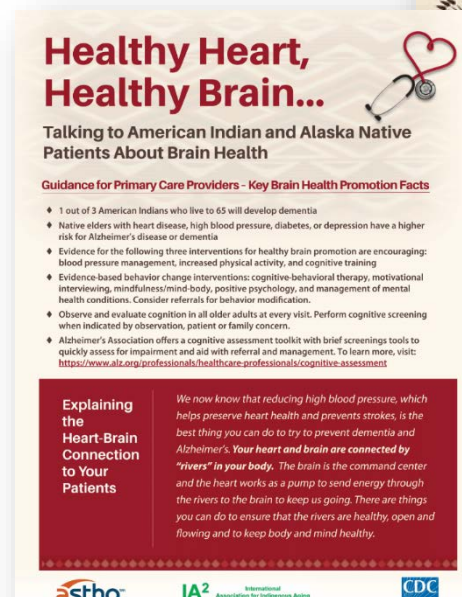
Resources to Jump into Action



<https://www.alz.org/media/Documents/executive-summary-healthy-brain-initiative-protecting-heart-and-brain.pdf>

Series of Communication Materials

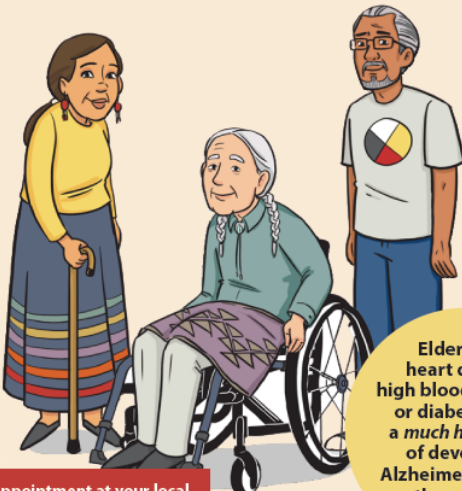
- Poster and flyers for clinics and health fairs
- Radio public service announcements
- Micro-videos for clinics
- Provider guide about heart and brain health
- Newspaper articles for the Indian Country Today Media Network



<http://www.astho.org/Healthy-Aging/Healthy-Heart-Healthy-Brain/>

NEW: Wisdom Keepers Campaign

Healthy Heart, Healthy Brain...
Help the wisdom keepers keep their wisdom





Elders with heart disease, high blood pressure, or diabetes have a much higher risk of developing Alzheimer's disease or other dementias.


Make an appointment at your local Urban Indian Organization to talk about how to keep your mind and heart healthy.

1 in 10 people age 65 and older has Alzheimer's disease.	1 in 3 American Indians over 65 develops dementia, including Alzheimer's disease.	5.7 million Americans have Alzheimer's disease.
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Watch the video and learn more at ncuih.org/wisdomkeeper

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Early Detection Matters.
Get health screening tests and wellness check-ups each year at your local Urban Indian Health facility.



Watch the video and learn more at ncuih.org/wisdomkeeper

<https://www.cdc.gov/aging/healthybrain/videos/index.html>

NEW: Healthy Brain Videos for Wisdom Keepers

Keeping Wisdom Keepers Healthy



Recognizing the Signs of Alzheimer's in Wisdom Keepers



Wisdom Keepers Living Healthfully with Alzheimer's



<https://www.cdc.gov/aging/healthybrain/videos/index.html>



**HEALTHY BRAIN
INITIATIVE**

State and Local Public Health Partnerships to Address Dementia: The 2018-2023 Road Map

NEW: Chronic Disease Messages



HEALTHY BRAIN.

It is normal for your brain to change as you get older. Having healthy blood pressure can lower your risk for memory loss and confusion. Follow your healthcare provider's guidance to manage your blood pressure.



HEALTHY BRAIN.

Having diabetes can put your brain health at risk. Diabetes can damage blood vessels, which results in reduced or blocked blood flow to the brain. This can double your risks for Alzheimer's disease, memory loss, and confusion.

It is important to keep your blood sugar levels under control to stay healthy. Visit your doctor regularly to help manage your diabetes. Here are some other ways to help you manage your blood sugar and protect your brain health:



HEALTHY BRAIN.

It is normal for your brain to change as you get older. A healthy diet may reduce your risk for memory loss and confusion. A healthy diet can help to improve your overall health, including brain health. A healthy diet:

- Emphasizes fruits, vegetables, whole grains and fat-free or low-fat milk and milk products
- Includes lean meats, poultry, fish, beans, eggs and nuts
- Is low in saturated fats, trans fats, cholesterol, salt (sodium) and added sugars
- Stays within your daily calorie needs

Please talk to your healthcare provider about how you can have a healthy diet.



HEALTHY BRAIN.

It is normal for your brain to change as you get older. Regular physical activity can have many benefits for health, including lowering your risk for memory loss and confusion. It can:

- Help you think better
- Improve your sleep quality and help you to fall asleep faster
- Improve your feelings of well-being
- Reduce symptoms of anxiety and depression
- Lower your risk of Alzheimer's Disease and related dementias

All forms and amounts of physical activity are helpful for the health of older adults. For maximum health benefits, older adults should do all 3 of these activities:



AT LEAST 150 MINUTES A WEEK
Something that gets your heart pumping like walking briskly or dancing



AT LEAST TWO DAYS A WEEK
Something that builds muscle like gardening or using exercise bands



Something to improve balance like walking heel to toe or standing on one foot



**HEALTHY BRAIN
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State and Local Public Health Partnerships to Address Dementia: The 2018-2023 Road Map



**NATIONAL ASSOCIATION OF
CHRONIC DISEASE DIRECTORS**
Promoting Health. Preventing Disease.



Newly Awarded

BOLD Public Health Centers of Excellence

Building Our Largest Dementia Infrastructure (BOLD)—*Public Health Centers of Excellence* to Address Alzheimer's Disease and Related Dementias (CDC-RFA-DP20-2005)

Funded 3 Public Health Centers of Excellence:

Dementia Caregiving - University of Minnesota

Dementia Risk Reduction - Alzheimer's Association

Early Detection of Dementia - NYU School of Medicine



PODCAST SERIES



[Aging and Health Matters Podcast Series](#)

- [Healthy Body, Healthier Brain \(English\)](#)
- [Cuerpo sano, cerebro sano \(Español\)](#)
- [Health Risks of Loneliness and Social Isolation in Older Adults](#)
- [Alzheimer's disease: Genes Do Not Equal Destiny \(English\)](#)
- [La enfermedad de Alzheimer: los genes no determinan nuestro destino \(Español\)](#)



**HEALTHYBRAIN
INITIATIVE**

State and Local Public Health Partnerships to Address Dementia: The 2018-2023 Road Map

Summary

- Public Health can impact Alzheimer's and other dementias and does have a role
- Healthy Brain Initiative, through its Road Map Series and BOLD, is helping public health and its partners chart a course for a dementia-prepared future



HEALTHY BODY.
HEALTHY BRAIN.

It is normal for your brain to change as you get older. Regular physical activity can have many benefits for health, including lowering your risk for memory loss and confusion. It can:

- Help you think better
- Improve your sleep quality and help you to fall asleep faster
- Improve your feelings of well-being
- Reduce symptoms of anxiety and depression
- Lower your risk of Alzheimer's Disease and related dementias

All forms and amounts of physical activity are helpful

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Alzheimer's Disease and Healthy Aging

COVID-19: Guidance for Older Adults



Healthy Brain Initiative Road Map for Indian Country

What's New?

- [Healthy Body, Healthier Brain](#)
- [Loneliness and Poor Health \(Español\)](#)
- [Help for Caregivers \(Español\)](#)
- [The Truth About Aging and Dementia \(Español\)](#)

What is Alzheimer's disease?



Caregiving



Healthy Brain Road Maps



Healthy Brain Initiative



Data and Statistics



Communications Center



Alzheimer's Disease and Healthy Aging Data Portal



Training for Health Professionals



Resources & Publications

cdc.gov/aging



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State and Local Public Health Partnerships to Address Dementia: The 2018-2023 Road Map

THANK YOU

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The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

