

PROTECTING THE HEART AND THE BRAIN:

A CALL TO ACTION FOR PUBLIC HEALTH PROFESSIONALS



Tens of millions of Americans live with high blood pressure — also known as hypertension. High blood pressure is a risk factor not only for stroke and heart disease, but also for cognitive impairment, including vascular dementia. With the aging of the Baby Boom generation, the number of Americans living with some form of dementia is expected to rapidly escalate between now and 2050. **The prevention and management of hypertension offers a prime opportunity for public health to reduce the risk of cognitive impairment, helping protect both cognitive and physical health.**

More and more evidence demonstrates that a healthy brain needs a healthy heart. Blood vessels in the brain are particularly susceptible to damage due to high blood pressure, and the resulting damage may increase the risk of stroke and dementia. In fact, **at the population-level, stroke doubles the chance of developing dementia**, and up to an estimated 90 percent of strokes are preventable. Both Alzheimer's and hypertension disproportionately impact black/African American and Hispanic/Latino populations, and eliminating both these disparities requires stronger action on hypertension now.

Results from a recent large-scale, randomized controlled trial show that the risk of developing mild cognitive impairment (MCI) among older adults can be significantly reduced through intensive blood pressure control.¹ This evidence suggests that strong public health action to prevent, delay, and manage hypertension would help reduce risk of cognitive impairment.

The Healthy Brain Initiative's Road Maps for **state and local public health** and for **Indian Country** call on public health agencies to reduce the risk of cognitive impairment across populations. The HBI Road Maps provide a foundation for decision-makers and public health practitioners to alter policies, systems, and environments to maximize risk reduction of cognitive decline and impairment. Starting to implement the Road Maps' risk reduction strategies now is essential to curb the growth in future cases of cognitive impairment and possibly dementia.

Addressing hypertension is an increasingly vital way to promote heart-brain health. View state-specific data and learn more in the full action brief.

Protecting the Heart and the Brain: Managing Hypertension to Reduce Risk of Cognitive Decline

SELECT FACTS:

- **Prevalence estimates of hypertension** among adults in the United States range from 75 million to 103 million. The estimates represent one-third to one-half of all American adults. Thus, a large segment of the population has an elevated risk of experiencing cognitive decline through just a single risk factor.
- Dementia is the loss of cognitive functioning that interferes with a person's daily life and activities. **Alzheimer's disease is the most common cause of dementia; vascular dementia is the second most common type.**
- In 2015, 58.8 percent of adults aged 45 and older who **reported subjective cognitive decline (SCD)** also reported having high blood pressure. SCD is one of the earliest warning signs of possible future dementia.
- Among individuals with high blood pressure, studies show those **using anti-hypertensive medications** have a **reduced risk** of later developing dementia compared with those who do not use these medications.

PUBLIC HEALTH ACTION

To reduce risk of cognitive impairment, public health can update and expand hypertension initiatives through the following HBI Road Map actions. The actions are grouped by 4 of the 10 Essential Services of Public Health. Find additional detail in the Alzheimer's Association action brief — [Protecting the Heart and the Brain: Managing Hypertension to Reduce Risk of Cognitive Decline](#).

EDUCATE & EMPOWER



- E-2** Build public knowledge about brain health across the life span.
- E-7** Expand people's use of interventions that enhance health, wellbeing, and independence.
- Indian Country (IC)-2** Encourage tribal community members to protect brain health and address cognitive impairment.

>> **Mind Your Risks**

National Institute of Neurological Disorders and Stroke (NINDS)

Available at: mindyourrisks.nih.gov

Public health campaign on the importance of controlling blood pressure to reduce the risk of stroke and possible dementia

>> **Healthy Heart, Healthy Brain**

Association of State and Territorial Health Officials (ASTHO) and the International Association for Indigenous Aging (IA²)

Available [online](#)

Public awareness materials for American Indian/Alaska Native (AI/AN) communities about the connection between heart and brain health

MONITOR & EVALUATE



- M-3** Use data to inform public health responses to cognitive health and caregiving.
- IC-5** Support collection and use of local information and data on dementia and caregiving to plan programs and approaches.

>> **Healthy Aging Data Portal**

Centers for Disease Control and Prevention

Available at: cdc.gov/aging

National and state-level data on subjective cognitive decline, caregiving, and other older adult health issues

ASSURE A COMPETENT WORKFORCE



- W-1** Prepare public health and healthcare professionals to inform people about brain health.
- W-3** Inform public health professionals about their role in addressing dementia.
- W-6** Educate healthcare professionals about their role in addressing dementia.
- IC-7** Educate healthcare and aging services professionals about the signs and symptoms of dementia.

>> **Clinical Practice Guidelines for the Prevention, Detection, Evaluation and Management of High Blood Pressure in Adults**

American College of Cardiology and the American Heart Association

Available [here](#)

Clinical care guidelines, featuring recommendation to lower hypertension as a way to reduce risk of cognitive decline

DEVELOP POLICIES & MOBILIZE PARTNERSHIPS



- P-1** Integrate effective interventions and best practices into policies and practices.
- P-2** Use training and certification to educate the public health workforce.
- IC-3** Utilize healthcare quality measures that address cognitive assessments and care delivery to AI/AN adults with dementia.

>> **Brain Health – Benefits of Blood Pressure Management as a Potential Mechanism to Reduce the Risk of Cognitive Decline and Dementia**

American College of Preventive Medicine (ACPM)

Available [here](#) with more information on ACPM's [Brain Health](#) page

CME/MOC-eligible module for physicians, nurses, and physician assistants

Citations for all data and statistics are found in the full action brief — [Protecting the Heart and the Brain: Managing Hypertension to Reduce the Risk of Cognitive Decline](#). Available at alz.org/publichealth.

1 Defined as targeted hypertension management in order to reduce systolic blood pressure to 120 mm Hg or below. Although hypertension is a modifiable risk factor for dementia for much of the lifespan, late-life hypertension onset — when hypertension develops at age 80 or older — has been associated with a decreased risk of dementia.

This executive summary is supported by Cooperative Agreement #5 NU58DP006115, funded by the Centers for Disease Control and Prevention. The findings and conclusions in this brief are those of the Alzheimer's Association and do not necessarily represent the official position of the Centers for Disease Control and Prevention or the Department of Health and Human Services.