

# Healthy Aging & ADRD ECHO

December 17, 2024



# Dementia Risk and Chronic Disease

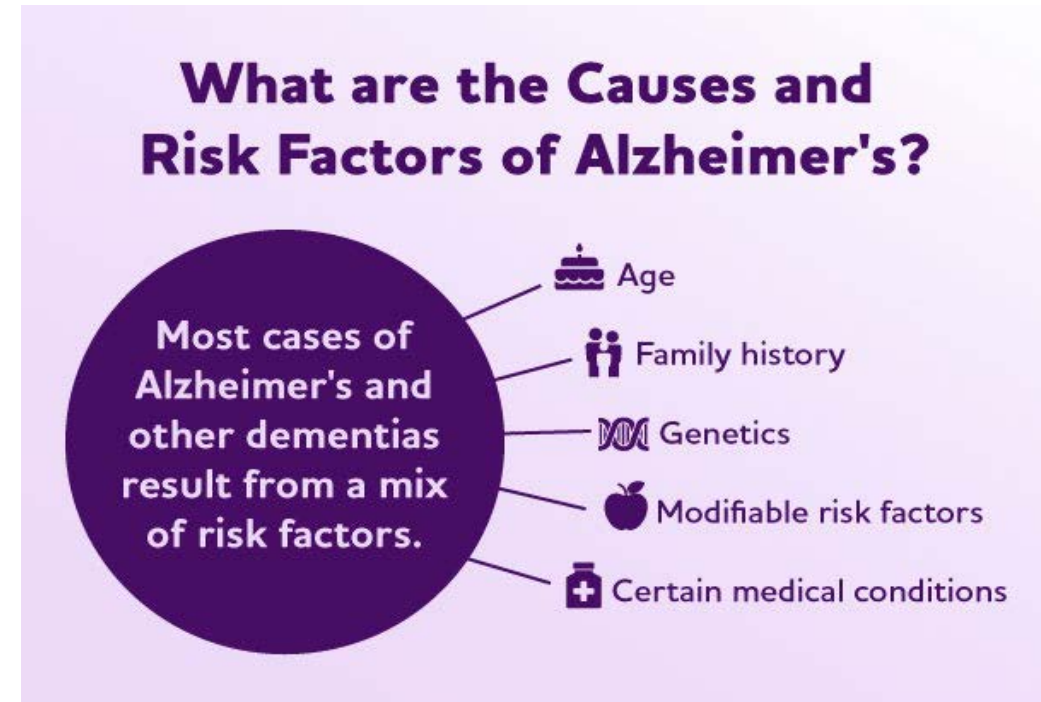
Wanda Spurlock,  
DNS, RN-GERO-BC, PMH-BC, CNE, FNGNA, ANEF, FGSA, FAAN

# Learning Objectives

- Discuss the concept of risk factors within the context of dementia.
- Discuss chronic conditions that increase the risk for cognitive impairment and dementia.
- Utilize data from the Louisiana Behavioral and Risk Factor Surveillance System, the Louisiana Report Card, and America's Health Rankings to identify health behaviors and chronic health conditions that can increase the risk of cognitive impairment and dementia.

# Risk Factors

- Characteristics that appear to have some relationship to the development of a disease.
- If present, increases the risk, but not the certainty, that disease will develop.
- While some are modifiable, some cannot be changed such as age, genetics, and family history.

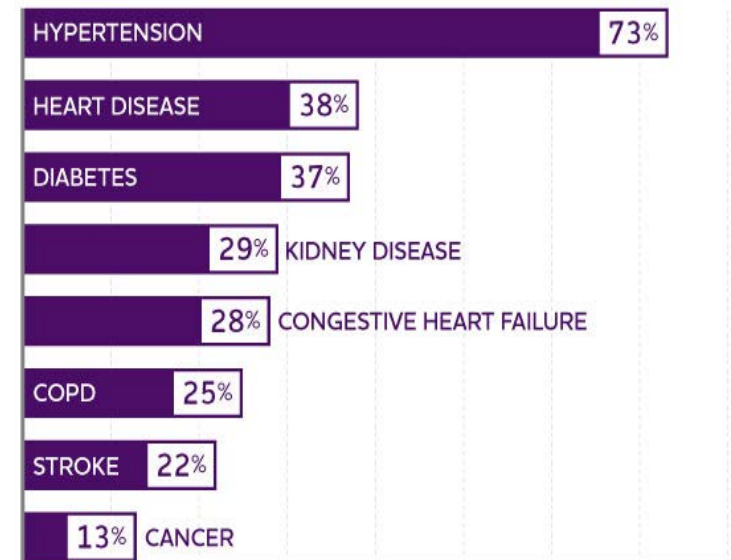


<https://www.alz.org/alzheimers-dementia/what-is-alzheimers/causes-and-risk-factors>

# Dementia Risk and Chronic Disease

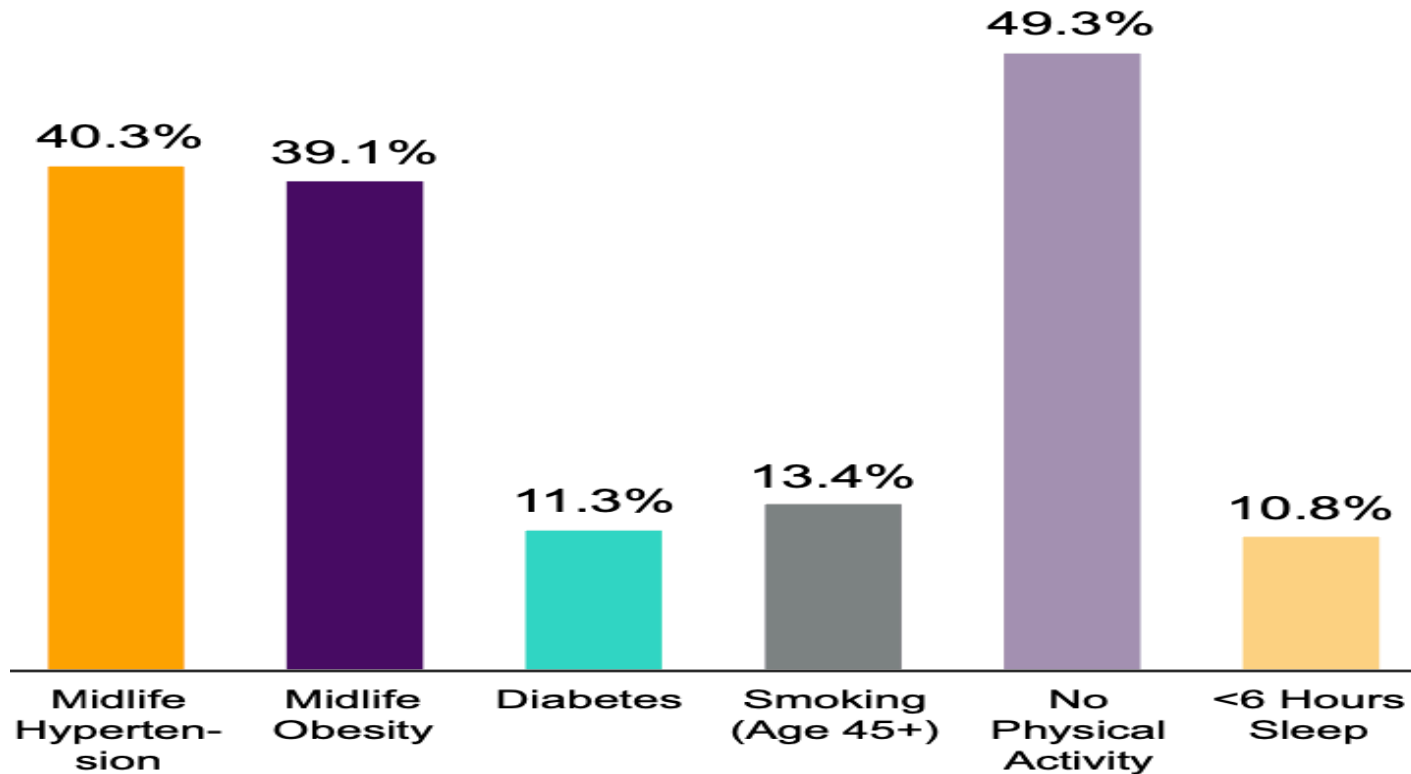
- Risk of developing dementia in later life can be influenced by factors present years and decades earlier.
- Chronic conditions increase the risk of developing dementia, however most persons living with dementia have one or more chronic conditions such as heart disease or diabetes, than can complicate care.

Percentage of People with Alzheimer's or Another Dementia Who Also Have...



# Dementia Risk Factors

## Prevalence of Dementia Risk Factors



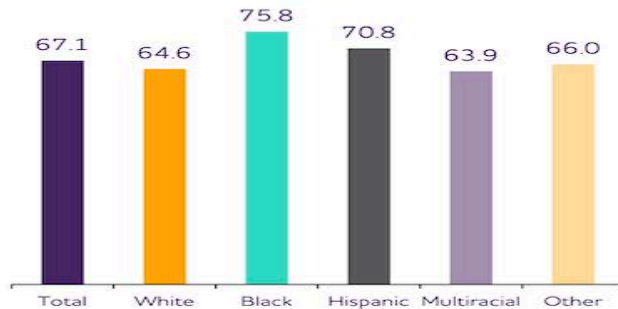
Fact Sheet. (March 2024).  
Reducing the risk of cognitive  
decline. Alzheimer's Association

# Risk Factors for Cognitive Decline: United States

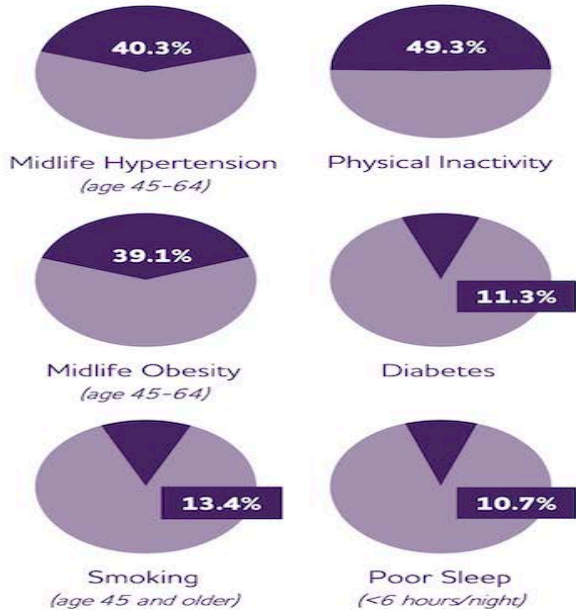
Based on population-level evidence, the six health conditions and behaviors included here increase risk for cognitive decline — and may also increase risk of dementia.

Data are from the Behavioral Risk Factor Surveillance System (BRFSS).

Percent With at Least One of Five Risk Factors (excluding sleep)



Prevalence of Six Risk Factors



Percent With Any of Five Risk Factors (excluding sleep)



This Fact Sheet is supported by the Centers for Disease Control and Prevention (CDC) of the U.S. Department of Health and Human Services (HHS) as part of a financial assistance award totaling \$733,487. The contents are those of the Alzheimer's Association and do not necessarily represent official views of nor an endorsement by, CDC, HHS, or the U.S. government.

Updated: March 2024

[CenterOfExcellence@alz.org](mailto:CenterOfExcellence@alz.org)

[alz.org/publichealth](https://alz.org/publichealth)

# Louisiana – Overall Rank: 50th

2023 Annual Report

<b>Behaviors</b>	
<b>Nutrition and Physical Activity</b>	<b>State Rank</b>
Exercise (% of adults)	42
Physical Inactivity (% of adults)	45
<b>Sleep Health</b>	
Insufficient Sleep (% of adults)	47
<b>Tobacco Use</b>	
Smoking (% of adults)	43
<b>Health Outcomes</b>	
<b>Physical Health</b>	
Multiple Chronic Conditions (% of adults)	45
Obesity (% of adults)	49



# Dementia Risk and Chronic Disease

## A Glance the State of Louisiana and Chronic Disease

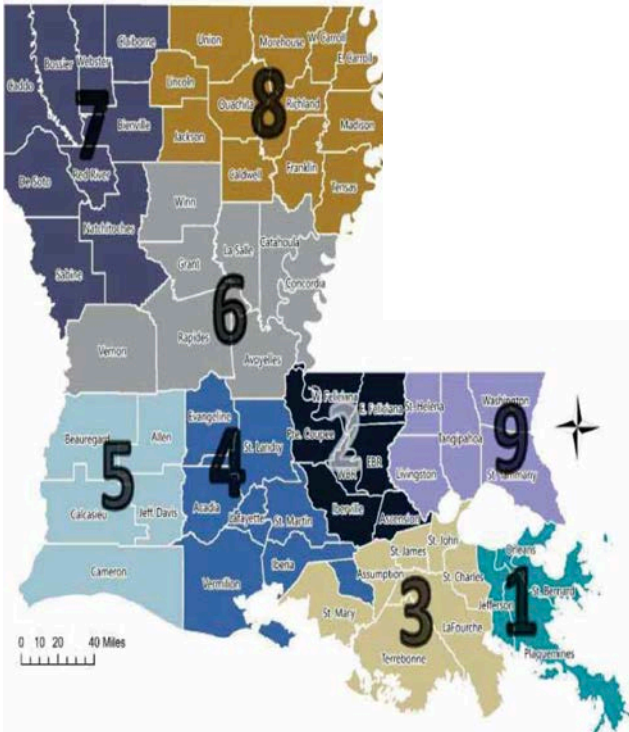
43 <sup>rd</sup>	Diagnosis of cardiovascular diseases
49 <sup>th</sup>	Percentage of obese adults
44 <sup>th</sup>	Percentage of adults with diabetes

Individuals with risk factor for CVD, i.e., ↑BMI, ↑fasting glucose, ↑B/P in early adulthood, have a higher risk of cognitive impairment in later life.

NIH Progress Report: Alzheimer's Disease and Related Dementias Research (2022).

2023 Louisiana Health Report Card: [https://ldh.la.gov/assets/oph/Center-PHI/2023\\_Health\\_Report\\_Card.pdf](https://ldh.la.gov/assets/oph/Center-PHI/2023_Health_Report_Card.pdf)

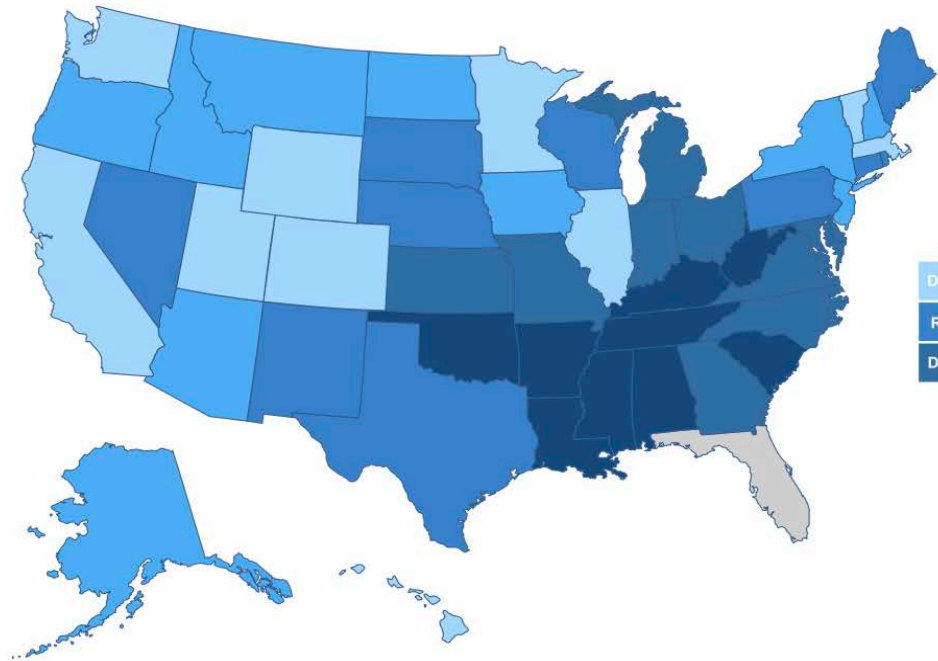
# Louisiana Behavioral Risk Factor Surveillance System (BRFSS) Data



[https://ldh.la.gov/assets/oph/Center-PHI/2023\\_Health\\_Report\\_Card.pdf](https://ldh.la.gov/assets/oph/Center-PHI/2023_Health_Report_Card.pdf)

2022 CONDITIONS/RISK FACTORS(% PREVALENCE)	REGION									TOTAL
	1	2	3	4	5	6	7	8	9	
DIABETES	13.4	13.4	16.1	13.8	15.5	16.3	17.7	14.9	14.2	14.7
OVERWEIGHT	33.4	29.8	31.4	33.5	32.1	31.8	29.9	31.3	31.1	31.7
OBESE	37.7	36.1	49.2	36.7	42.6	41.8	44.2	38.3	40.7	40.1
STROKE	5.1	4.5	7.7	4.1	4.3	2.8	6.3	5.7	4.0	4.9
MI (HEART ATTACK)	5.6	3.5	6.3	4.8	4.4	7.1	4.5	6.0	4.8	5.1
CHD (ANGINA)	4.9	4.4	8.4	4.9	2.7	5.3	3.9	5.3	5.6	5.0
EVERY DAY SMOKER	11.7	9.9	13.7	12.9	14.8	12.3	10.4	12.0	14.3	12.0
ALL CURRENT SMOKERS	15.3	13.5	19.6	16.9	18.5	16.3	15.5	21.3	18.4	16.7
EX SMOKER	22.2	21.6	25.3	24.7	25.3	29.0	25.0	24.3	32.1	25.2
NEVER SMOKER	62.5	64.9	55.1	58.4	56.1	54.7	59.5	54.5	49.5	58.1
ASTHMA	16.8	16.2	19.9	16.3	15.8	14.3	16.0	16.6	14.0	16.2
COPD	8.9	7.2	12.3	7.3	10.0	11.1	7.7	11.7	10.8	9.3
SKIN CANCER	3.4	4.2	2.9	3.8	3.4	4.8	3.3	6.4	6.5	4.2
OTHER CANCER	7.2	7.7	8.4	6.7	5.7	7.0	7.9	8.5	8.0	7.5
ARTHRITIS	27.6	25.6	33.8	28.8	2.9	31.6	36.3	35.2	35.2	31.1
DEPRESSIVE DISORDER	25.9	25.1	26.5	25.2	29.6	29.5	23.9	19.2	31.8	26.4
KIDNEY DISEASE	4.3	3.7	6.2	4.1	5.9	4.9	4.1	4.8	4.5	4.5

# High Blood Pressure by State



**% of adults who reported being told by health professional that they had high blood pressure**

Data from CDC, Behavioral Risk Factor Surveillance System, 2021



America's Health Rankings analysis of CDC, Behavioral Risk Factor Surveillance System, United Health Foundation, AmericasHealthRankings.org, accessed 2024.

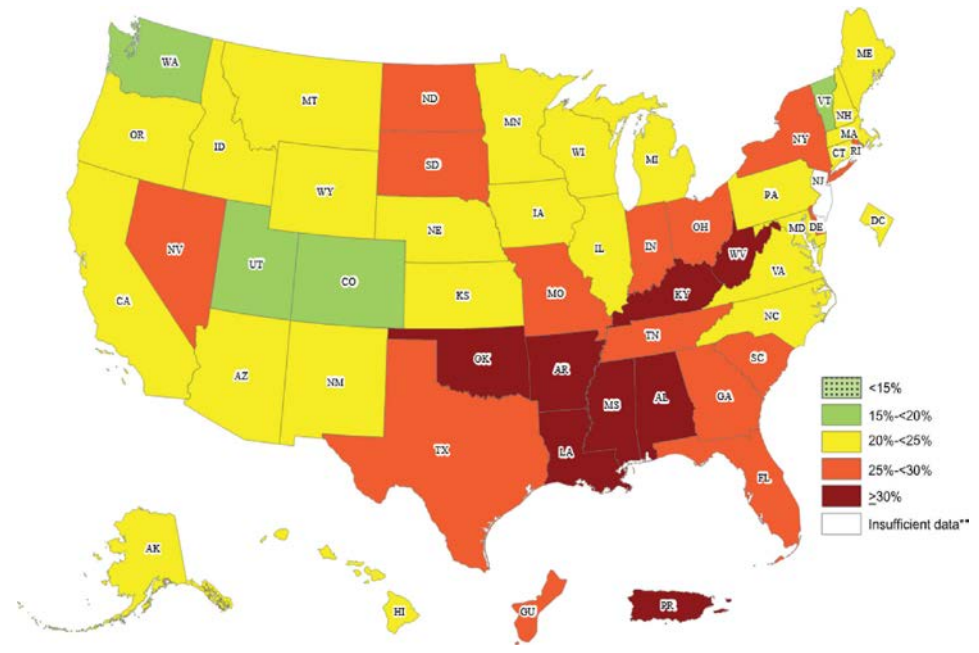
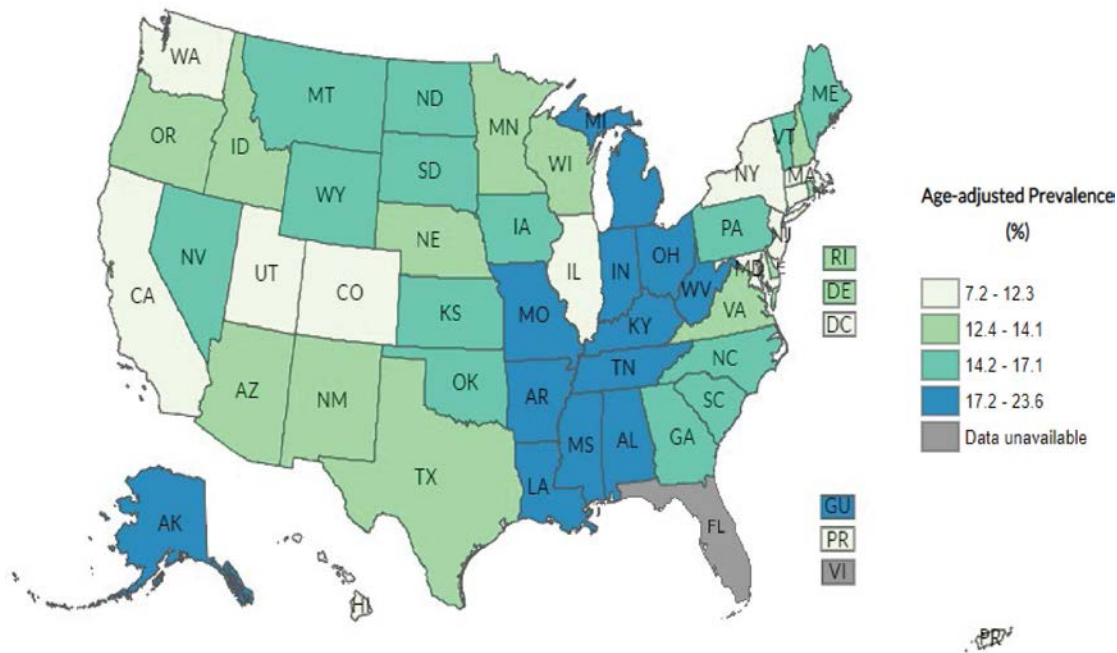
# Hypertension and Dementia Risk

- Prevalence of hypertension affects nearly half of U.S. adults.
  - Randomized clinical trials found that aggressive blood pressure control significantly reduced risk of developing MCI.
  - On average, less than 1/5<sup>th</sup> of adults with hypertension have their condition aggressively controlled (systolic B/P <120 mmHg).
  - Long-term research studies have shown that individuals with hypertension in mid-life (44-64 years of age) were more likely to develop dementia.
  - Midlife vascular factors (hypertension) were associated with 25-year incident dementia in the diverse *Atherosclerosis Risk in Communities* (ARIC) observation cohort.
  - In the Coronary Artery Risk Development in Young Adults (CARDIA) study, cumulative B/P exposure over time, starting in young adulthood, was associated with mobility and cognitive decline.
  - Vascular health and cognitive health closely related.
  - Chronic hypertension most prevalent risk factor for cognitive impairment in aging.
  - Hypertension also recognized as strongest risk factor for stroke.
- Prevention most effective means of changing the trajectory of a disease.
  - Strong scientific evidence for treating hypertension as effective means to reducing risk of cognitive dysfunction in older age.
  - Despite wide availability of existing treatments, access is a major concern for underrepresented populations, many of which have higher rates of hypertension and dementia.
  - Based on link between chronic hypertension and ADRD incidence, an additional target population for prevention should include middle-aged adults.

<https://www.alz.org/media/Documents/alzheimers-dementia-reducing-risk-cognitive-decline-ph-fs.pdf>

Cardiovascular risk factors, cognitive decline, and Dementia: What's good for the heart is good for the brain. Public Health Center of Excellence. Alzheimer's Association. Dementia risk reduction.

# Age-adjusted Prevalence of with Diagnosed of Diabetes, U.S. and Territories (BRFSS, 2021) and Percentage of Self-reported Physical Inactivity among US Adults $\geq 18$ years (BRFSS, 2017-2020)



Seth S. Martin. Circulation. 2024 Heart Disease and Stroke Statistics: A Report of US and Global Data From the American Heart Association, Volume: 149, Issue: 8, Pages: e347-e913, DOI: (10.1161/CIR.0000000000001209)

Seth S. Martin. Circulation. 2024 Heart Disease and Stroke Statistics: A Report of US and Global Data From the American Heart Association, Volume: 149, Issue: 8, Pages: e347-e913, DOI: (10.1161/CIR.0000000000001209)

# Heart Failure, Atrial Fibrillation & Coronary Heart Disease Linked to Cognitive Impairment

A new American Heart Association scientific statement suggests addressing cardiovascular health earlier in life may reduce the risk of stroke and help preserve thinking and memory later in life



## Statement Highlights:

- Previous studies have found that 14-81% of patients with heart failure experience some degree of cognitive impairment affecting language, memory or executive function.
- Evidence also indicates that people with atrial fibrillation have a 39% increased risk of memory or thinking problems; adults with heart disease have a 27% higher risk of developing dementia; and up to 50% of individuals experience cognitive decline after a heart attack.
- Managing heart health from an early age is important, not only for preventing heart disease but also for protecting brain health and reducing the risk of cognitive impairment in later life.

<https://newsroom.heart.org/news/heart-failure-atrial-fibrillation-coronary-heart-disease-linked-to-cognitive-impairment>

# Diabetes and Cognitive Decline

- Persons with type 2 diabetes (T2DM) are at a greater risk of dementia.
- Strong correlation between AD and high glucose levels.
- Persons who develop T2DM have ↑risk of dementia and more likely to have the disease at younger age.
- Persons who have diabetes along with CVDs such as CHD, heart failure, or stroke have an even ↑risk.
- Persons with T2DM show accelerated cognitive decline (specifically in executive function and information processing).

## Louisiana Diabetes Epidemic

- Approximately 486,600 adults in Louisiana, or 13.8% of the adult population, have diagnosed diabetes.
- Every year, an estimated 20,800 adults in Louisiana are diagnosed with diabetes.

## Louisiana Obesity Epidemic

- Approximately 1,410,400 adults in Louisiana, or 40.1% of the adult population, have obesity.

Source: diabetes.org/SFSSources

<https://www.alz.org/media/documents/alzheimers-dementia-diabetes-cognitive-decline-ts.pdf>

# 12 Dementia Risk Factors



*Assuming a causal link between 12 dementia risk factors, as many as 40% of all cases of AD are attributable to those risk factors.*

<https://www.alz.org/media/Documents/alzheimers-dementia-reducing-risk-cognitive-decline-ph-fs.pdf>

Source: Livingston et al. A, et al. Dementia prevention, intervention, and care: 2020 report of the Lancet Commission

[www.alzint.org](http://www.alzint.org)





# Nutrition, Diet, and Cognition: Seeing Food as Medicine

- Findings from many studies support the recommendation of a balanced pattern of eating, i.e., the Mediterranean-style diet, for cognitive and overall health.
- Recently recommended by WHO for all adults with normal cognition or MCI as one factor that may reduce risk of cognitive decline or dementia.
- The AHA and the U.S. government's Dietary Guidelines for Americans recommend diet that **emphasizes**:
  - plant-based foods, i.e., fruits, vegetables, whole grains, nuts and seeds, low-fat dairy, fish, and lean meats.
- **Limitation or avoidance of:**
  - red meats, sodium, saturated fats, sugars and highly processed foods.

Diet, Nutrition, and Cognition: Seeing Food as Medicine. Public Health Center of Excellence. Dementia Risk Reduction. Alzheimer's Association.

<https://www.youtube.com/watch?v=X2vEfC5I9us>

# *Exercise as Medicine to Prevent Cognitive Decline and Dementia: Is it Worth the Sweat?*

- Increasing evidence exists that physical exercise, particularly, aerobic training, has favorable effects on multiple outcomes, including reduced risk against cognitive decline and possibly development of Alzheimer's.
- U.S. DHHS recommends at least 150 mins of moderate-intensity exercise or 75 mins of vigorous-intensity exercise, or an equivalent combination, per week to maintain overall health and function and to reduce the risk of a number of chronic diseases.
- Physical activity was included as a top priority in its recent review of 12 non-pharmacological interventions with the potential to reduce the risk of cognitive decline and dementia by the World Health Organization (WHO).

<https://www.youtube.com/watch?v=PFJoPYm>

pHM

# Thank you!

Next Session: January 21, 2025 from 12:00 p.m. to 1:00 p.m.  
Evaluation, Diagnosis, and Assessment in the Primary Care Office  
by Elizabeth Disbrow, PhD and Anne Foundas, MD, FAAN

