BRAIN HEALTH ACADEMY
UsAgainstAlzheimer's

Alcohol Use and Dementia

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Acknowledgements

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Eisai

Presenter

Leon G. Coleman Jr, MD, PhD received his BS in Chemical Engineering at the University of Virginia Engineering School, where he studied platelet biochemistry in the laboratory of Adrian Gear. He completed the MD/PhD program at UNC Chapel Hill where he studied the persistent effects of early postnatal and adolescent alcohol exposure on the adult brain with Fulton Crews. After medical school he completed 2 years of General Surgery Residency before returning to the lab as a Research Associate where he studied immune mechanisms underlying alcohol abuse and severe burn injury. Dr. Coleman began his lab at UNC in 2020 in the Department of Pharmacology, where the overriding goal of the lab's work is to identify novel treatments for immune related conditions such as Alzheimer's disease, addiction, cancer and trauma.

Course Description

There is growing evidence that suggests a link between alcohol use and dementia. Several studies have shown that there is a strong link between the high-level alcohol consumption and an increase in dementia risk. This course provides strategies and resources to help health professionals address alcohol use and build cognitive resilience.

Learning Objectives

- **Participants will be able to list 6 or more modifiable risk factors for dementia.**
- **Participants will be able to summarize the link between alcohol use and dementia**
- **Participants will be able to identify effective interventions and strategies to address alcohol use with a special focus on adults 45+.**
- **Participants will be able to identify special considerations for high-risk populations.**

Facts: Alzheimer’s and related dementias (ADRD)

Scope of the Epidemic (U.S.)[3]

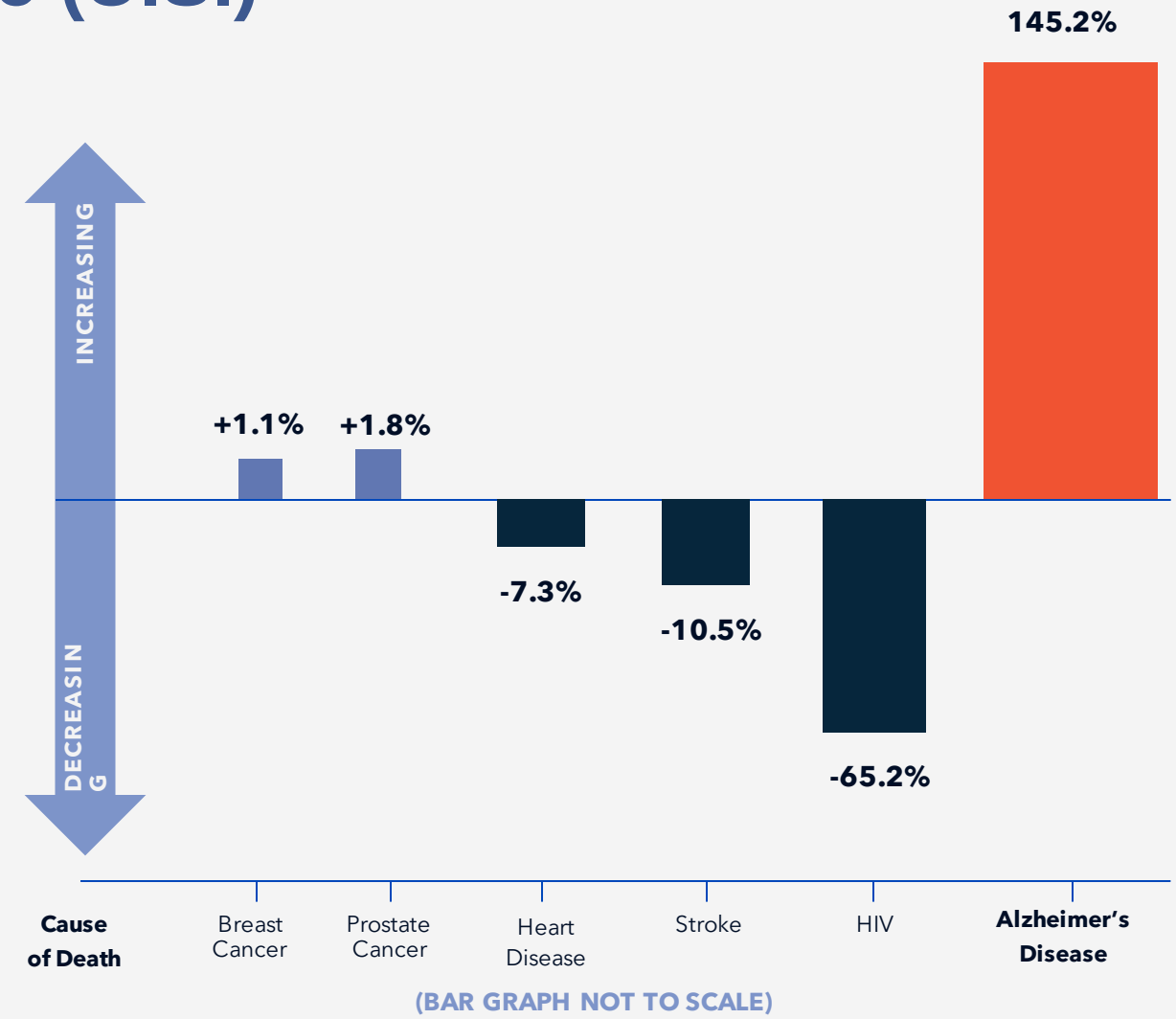
6.5 million adults

1 in 9 adults age ≥65

1 in 3 adults age ≥85

2/3 are women

Alzheimer's deaths increased 145% from 2000-2019, while other top causes of death have declined



Inequities in Brain Health [3, 4, 5]

African American people are
2X AS LIKELY
to have Alzheimer's

Latino people are
1.5X AS LIKELY
to have Alzheimer's

Less likely than White patients to receive a timely diagnosis;

More likely to report experiencing racial discrimination along their patient and caregiver journeys;

Less likely to be enrolled in cutting-edge Alzheimer's and brain health research.

Health Disparities & Comorbidities for Alzheimer's in the African American Community[6]

44% More Likely to have a stroke.

23% More Likely to live with obesity.

25% More Likely to die from heart disease.

72% More Likely to be diabetic.

2X AS LIKELY

TO HAVE ALZHEIMER'S

Modifiable Risk Factors for Dementia

Alzheimer's: Non-Modifiable Risk Factors

Age [3]

Number one risk factor is advancing age.

Risk doubles every 5 years after age 65.

Family History [2]

Genetics (e.g., APOE genotype)

Education [4]

Fewer years of formal education and lower levels of cognitive engagement may be risk factors.

Sex [15]

2/3 of those with Alzheimer's are women.

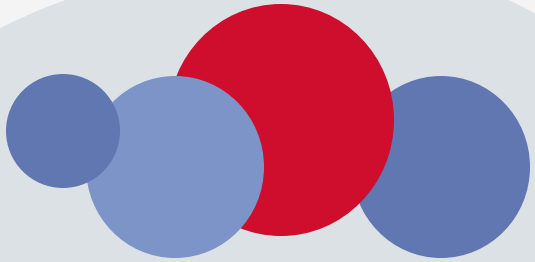
16% of women age ≥ 71 (11% of men).

After age 65, have more than 1 in 5 chance (1 in 11 for men).

Modifiable Risk Factors [8]

60%

Reduction in dementia risk by addition of 4-5 healthy lifestyle factors



INCREASE

- Healthy Diet (DASH diet)
- Physical Activity
- Mental Activity
- Cognitive and social activity

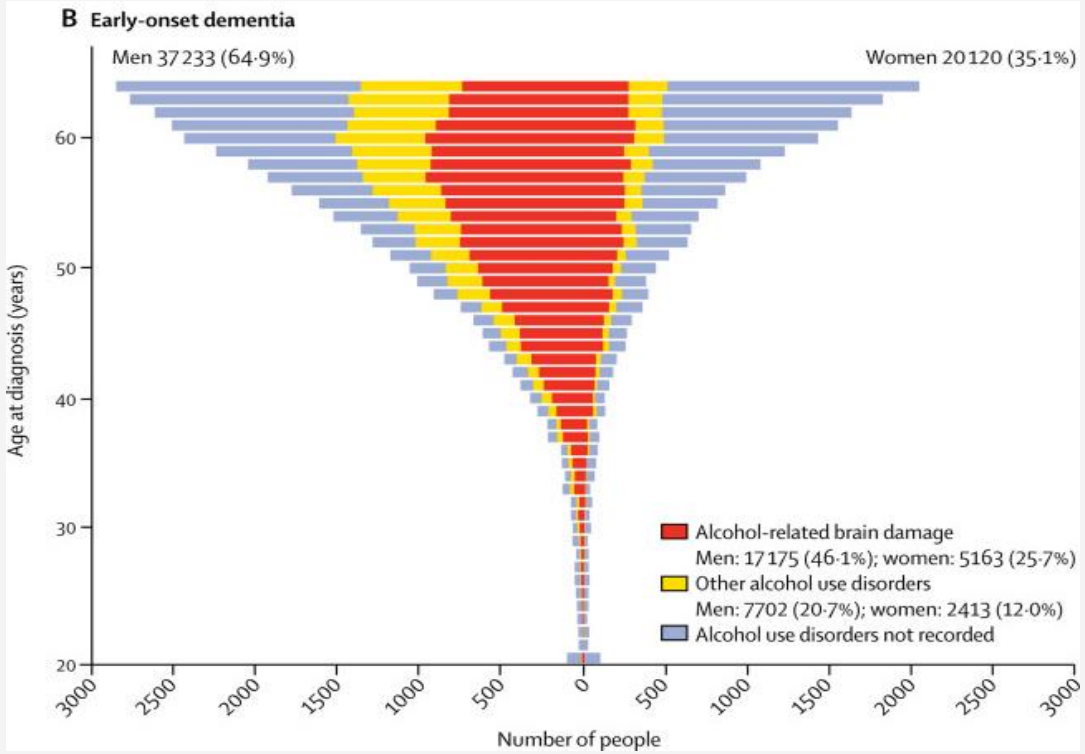
DECREASE

- Hypertension
- High cholesterol
- Uncontrolled diabetes
- Obesity
- Smoking
- Depression
- **Excessive Alcohol Intake**
- Head Injury
- Air Pollution
- Hearing Loss

The link between Alcohol use and Alzheimer’s and related dementias

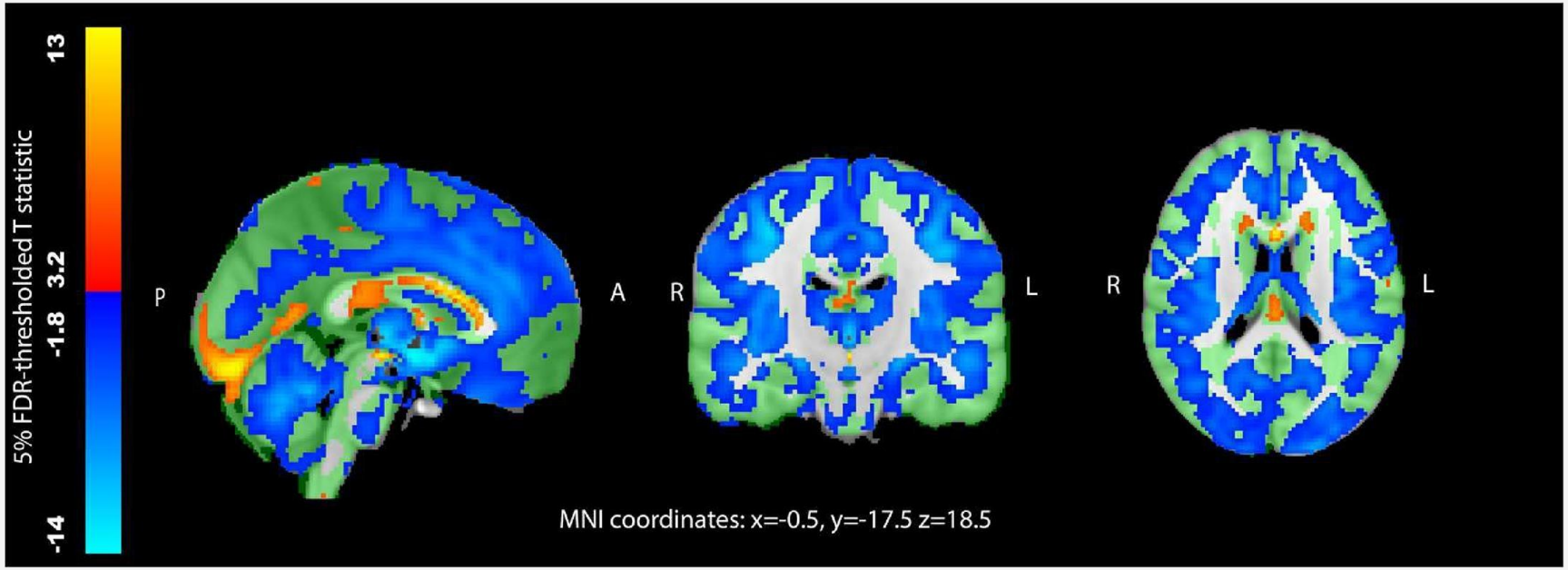
Alcohol Use and Dementia Link[17, 13]

Heavy Alcohol Use is one of the strongest modifiable risk factors for dementia



>1,000,000 Individuals
EtOH #1 modifiable risk factor

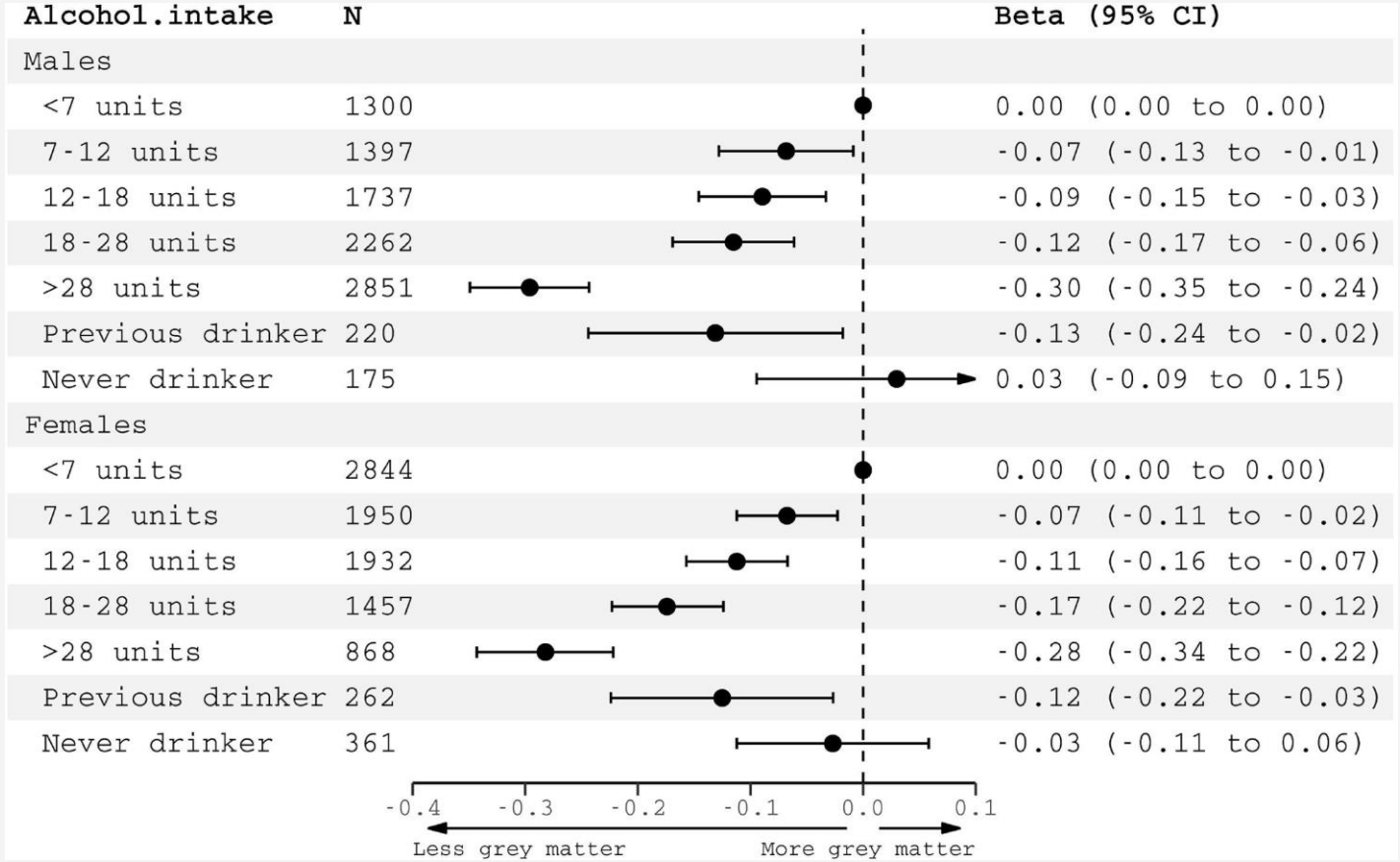
Alcohol Use and Dementia Link [19]



UK biobank
>25,000 brain MRIs

Age-vulnerable regions that shrink with alcohol use

Alcohol Use and Dementia Link [19]

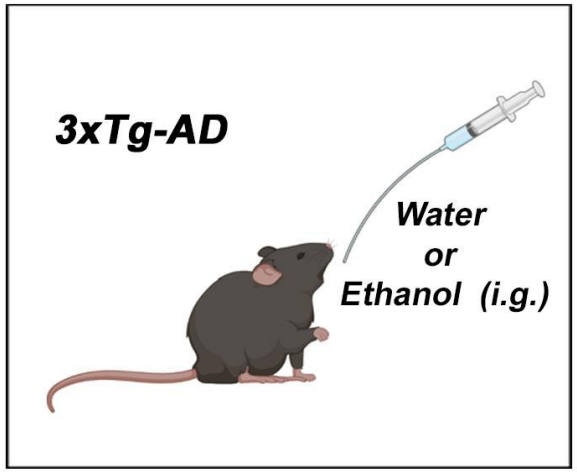


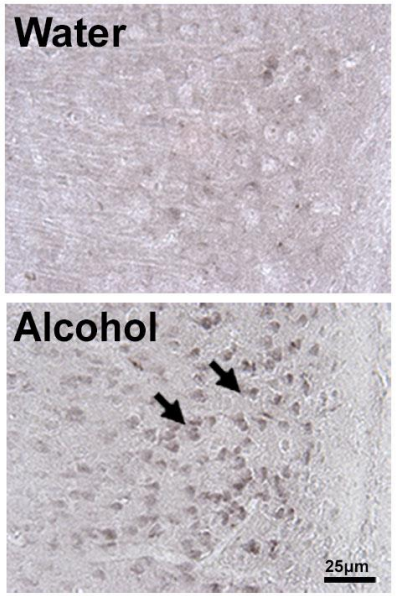
UK biobank
>25,000 brain MRIs

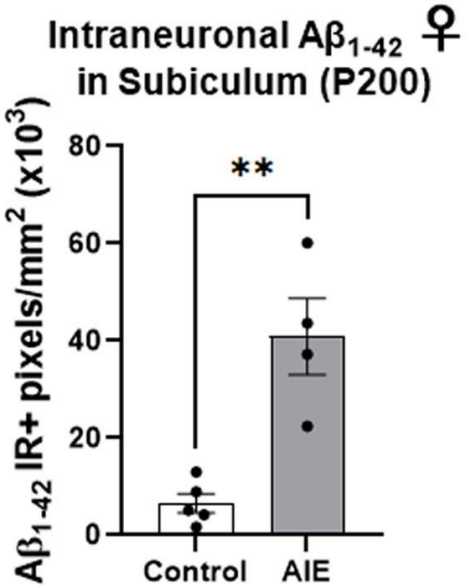
1 drink per day lowers brain volumes

Alcohol Use and Dementia Link[7]

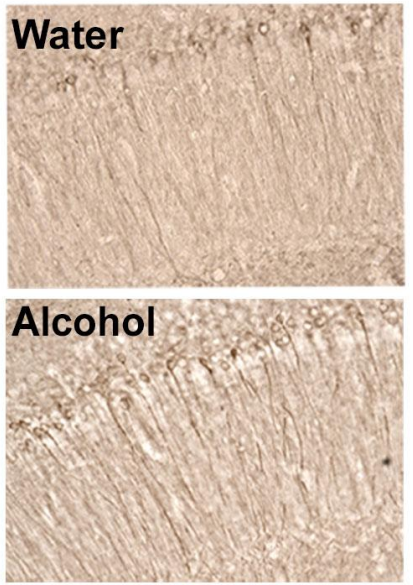
Amyloid

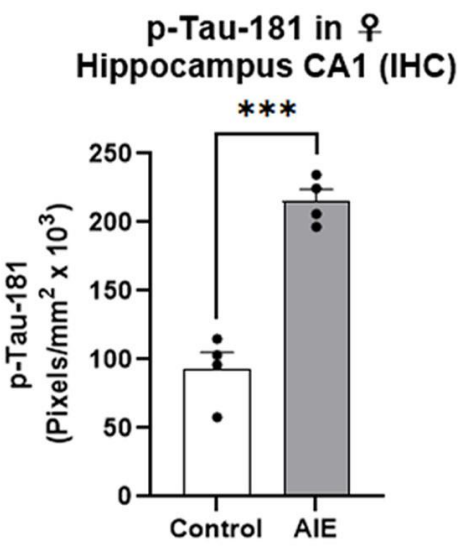




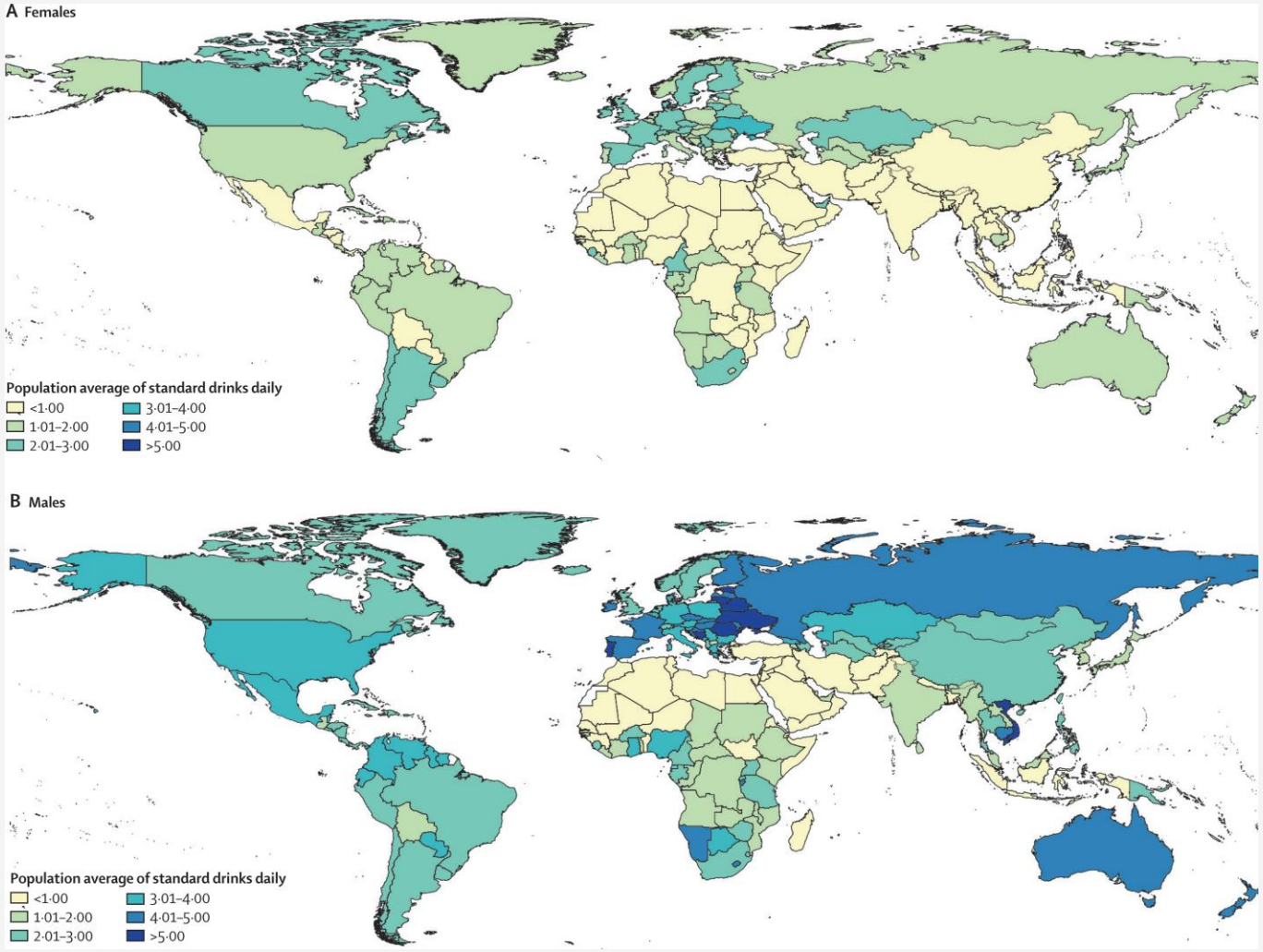


Tau





Alcohol Use and Dementia Link [11]



US:
Females: 1-2 drinks/day
Males: 3-4 drinks/day

Alcohol and Older Adults

- Alcohol misuse can negatively affect certain areas of cognition, like memory.
- Drinking too much alcohol can damage the brain (as well as the liver, heart, and other organs).
- Heavy alcohol use can damage older adults' ability to:

1. Learn new information.
2. Speak and understand language
3. Recall information.
4. Solve problems.
5. Think and react quickly.

- Heavy alcohol use can lead to negative physical changes in the brain. For instance, too much alcohol can cause brain cells and tissues to shrink or no longer work as they should.
- Even lower levels of alcohol use can sometimes harm the brain of middle-aged and older adults, including areas of the brain that control memory.

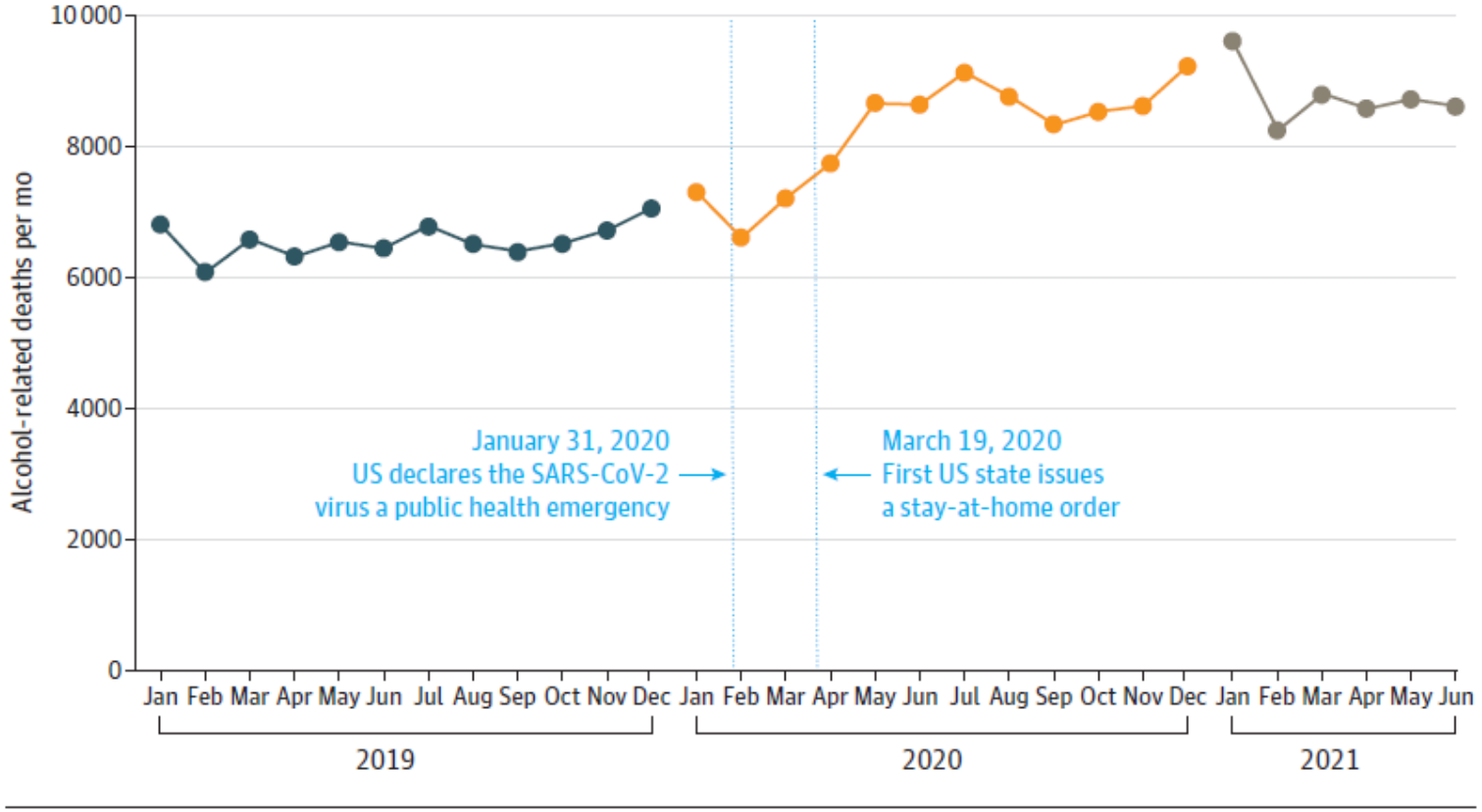
Alcohol use: disparities and the impact of social determinates of health

Social Determinants of Health [12]

- Drinking for social enhancement
- Social networks promote drinking
- Income
- Early childhood trauma
- Access to quality health services
- Unstable housing – increased unhealthy alcohol use

Social Determinants of Health: Pandemic [22]

Figure. Monthly Alcohol-Related Deaths Among People 16 Years and Older



Alcohol use intervention recommendations

Alcohol Use Interventions[1]

Ask every patient yearly about alcohol and tobacco use

Look for signs of risky alcohol use

Call alcohol a health risk factor to reduce shame

Observe how patients respond to the topic

Help patients develop an alcohol diet plan

Offer resources to help reduce risky drinking

Listen for patient perceptions and reception of your message

Alcohol Use Interventions[1]

Ask

Look

Call

Observe

Help

Offer

Listen

Single Alcohol Screening Question
USAUDIT (10 questions)
USAUDIT-C (3-question)

Alcohol Use Interventions[1]

Ask

Look

Call

Observe

Help

Offer

Listen

Feedback from Spouse or Partner

Family history

Alcohol Use Interventions[1]

Ask

Look

Call

Observe

Help

Offer

Listen

Call alcohol as dietary/health risk factor for disease, beyond the risk for addiction

Alcohol Use Interventions[1]

Ask

Look

Call

Observe

Help

Offer

Listen

Pause to observe patient attitudes and body language

Alcohol Use Interventions[1]

Ask	
Look	
Call	Help patients become aware of their perception of alcohol use
Observe	
Help	Help patients know the health risks of alcohol
Offer	
Listen	Help patients develop an alcohol diet and nutrition plan

Alcohol Use Interventions[1]

Ask

Look

Call

Observe

Help

Offer

Listen

<u>Medical/Pharmacological:</u>

Naltrexone

Acamprosate

<u>Psychiatric:</u>

Motivational Interviewing

Cognitive Behavioral Therapy

<u>Community/Social:</u>

Church groups, AA, NA

Alcohol Use Interventions[1]

Ask

Look

Call

Observe

Help

Offer

Listen

Listen for patient responsiveness and receptiveness toward managing alcohol use

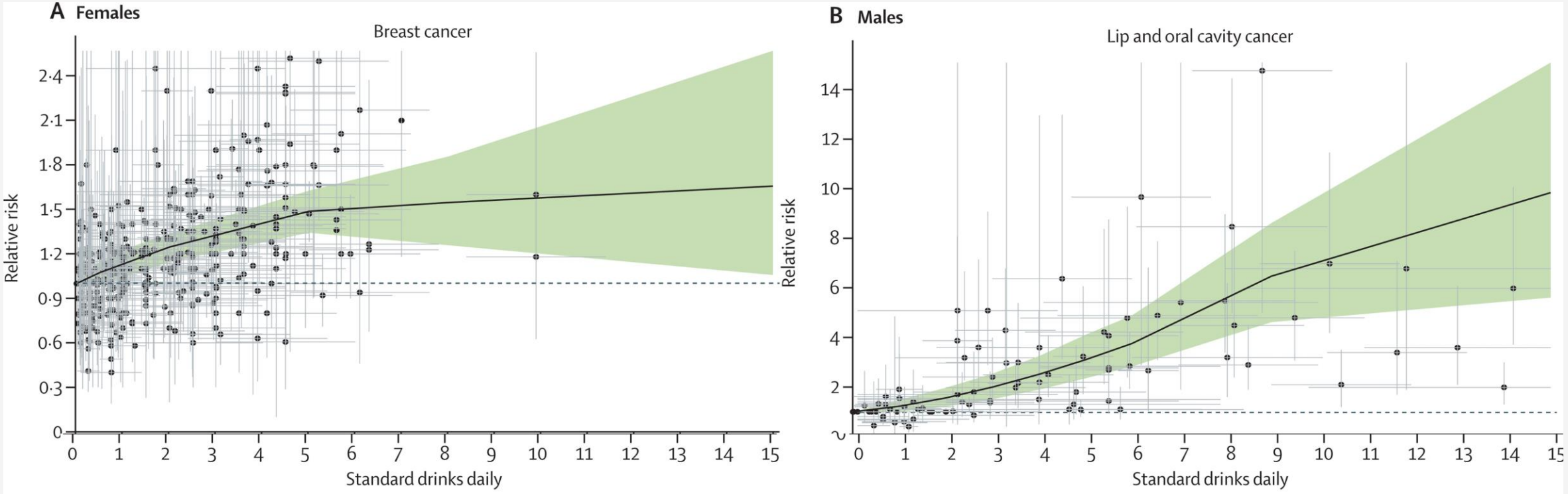
Make this a regular routine with annual visits

Other benefits of addressing Alcohol use

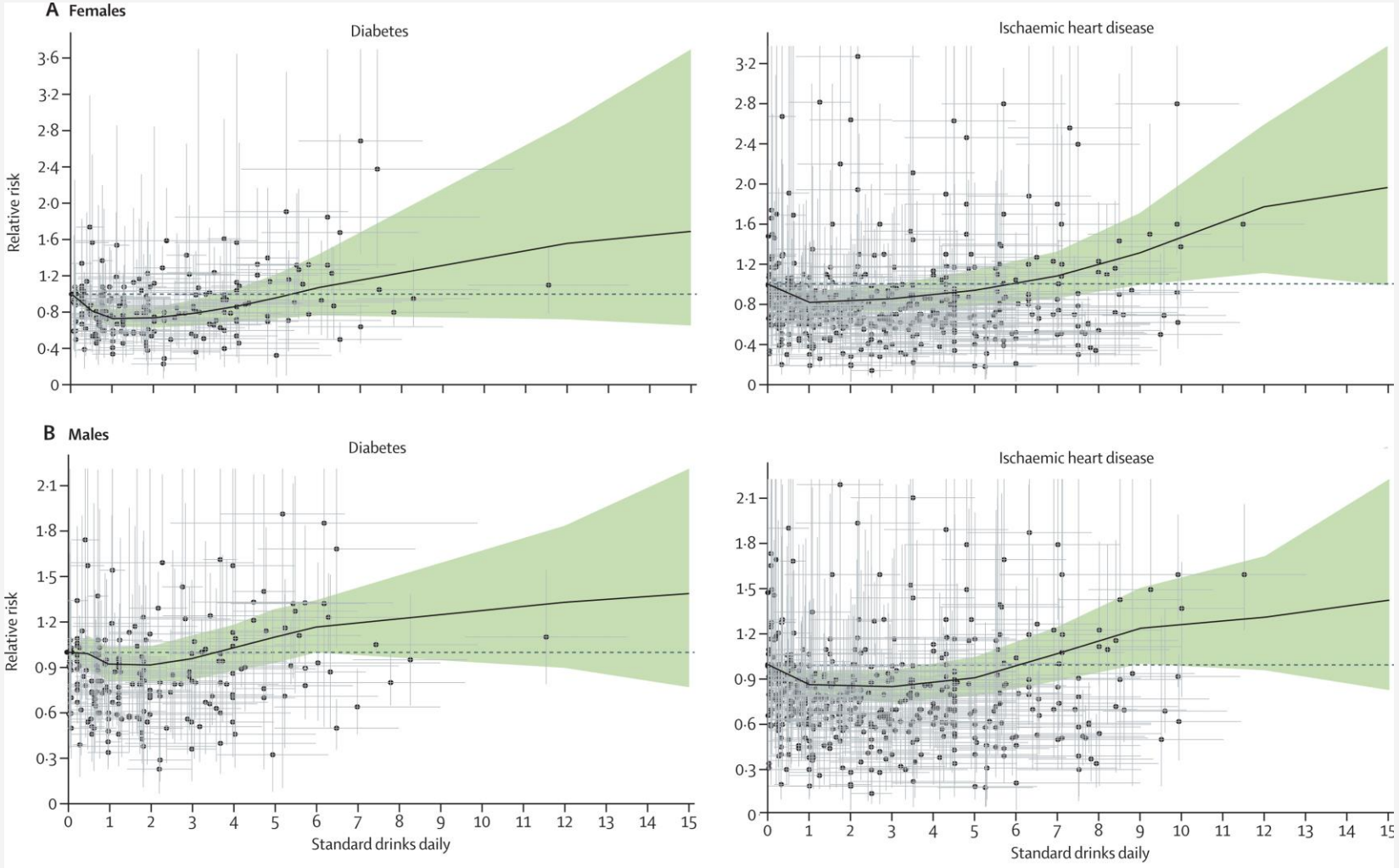
Physical and Mental Health Improvements[8]

- Improved blood pressure
- Body weight reduction
- Fewer alcohol-related injuries
- Recovery of ventricular function in cardiomyopathy
- Improved liver function
- Reduced psychiatric episodes
- Reduced anxiety and depression
- Improved self confidence
- Better social functioning
- Improved quality of life

Overall Health Improvements [9]



Overall Health Improvements [9]



Considerations for implementation

Older Adults[16]

- Some older patients may decline referral to treatment programs because of perceived negative stigma
- Alcohol overuse is common but underrecognized problem among older adults.
- 1/3 of older alcoholic persons develop a problem with alcohol in later life, while the other 2/3's grow older with the medical and psychosocial sequelae of early-onset alcohol use disorder.
- The common definitions of alcohol abuse and dependence may not apply as readily to older persons who have retired or have few social contacts.

Older Adults[16]

- The effects of alcohol may be increased in elderly patients because of pharmacologic changes associated with aging. Interactions between alcohol and drugs, prescription and over-the-counter, may also be more serious in elderly persons. Physiologic changes related to aging can alter the presentation of medical complications of alcoholism.

- Management of alcohol withdrawal in elderly persons should be closely supervised by a health care professional. Alcohol treatment programs with an elder-specific focus may improve outcomes in some patients.

What patients think
(A List if available)

What Matters Most Insights Survey: Alcohol Use

- **91%** believe that drinking alcohol affects the brain and brain health with **55%** saying the impact is significant
- **69%** drink alcohol, at least some of the time; 41% have 3 or more drinks a week
- **3%** believe they are alcoholic
- **28%** have drank alcohol routinely

- 7% believe drinking has affected their brain health (26% are unsure)
- 75% believe there is a connection between alcohol and depression (22% are "unsure")
- 8% feel totally uninformed about effects of alcohol
- Information largely obtained online (58%) and from HCPs (43%)

Respondents largely over age 65 (67%), Caucasian (92%), female (78%), college educated or greater (73%)

USAGAINSTALZHEIMER'S A-LIST

N=628 (ADRD/MCI diagnosis: 54; high risk for ADRD: 164; current caregivers: 71; former caregivers: 187; general interest in brain health: 152)

Tools and resources for health professionals

Patient Resources[21]

- **Your doctor.** Primary care and mental health practitioners can provide effective AUD treatment by combining new medications with brief counseling visits. To aid clinicians, NIAAA has developed a guide for younger patients, *Alcohol Screening and Brief Intervention for Youth: A Practitioner's Guide*. This guide and other resources are available at https://www.niaaa.nih.gov/health-professionals-communities
- **Specialists in AUD.** For specialty addiction treatment options, contact your doctor, health insurance plan, local health department, or employee assistance program.

Patient Resources[21]

Medical and Non-Medical Addiction Specialists

- **American Academy of Addiction Psychiatry**

(401) 524–3076

- **American Psychological Association**

(800) 964–2000 (ask for your state's referral number to find psychologists with addiction specialties)

- **American Society of Addiction Medicine**

(301) 656–3920 (ask for the phone number of your state's chapter)

- **NAADAC, the Association for Addiction Professionals**

(800) 548–0497

- **National Association of Social Workers**

(search for social workers with addiction specialties)

Patient Resources[21]

Mutual-Support Groups

Alcoholics Anonymous (AA)

(212) 870–3400

Moderation Management

(212) 871–0974

SMART Recovery

(440) 951–5357

Women for Sobriety

(215) 536–8026

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Thank you!

This presentation and related resources are available at:

https://www.usagainstalzheimers.org/hearing-and-dementia

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