Brain Health in Aging

Dementia Prevention

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- No financial disclosures
- The views and opinions in this presentation are those of the presenter and they do not necessarily reflect, and should not be taken as, official policy of the U.S. Department of Veterans Affairs or the University of Washington.

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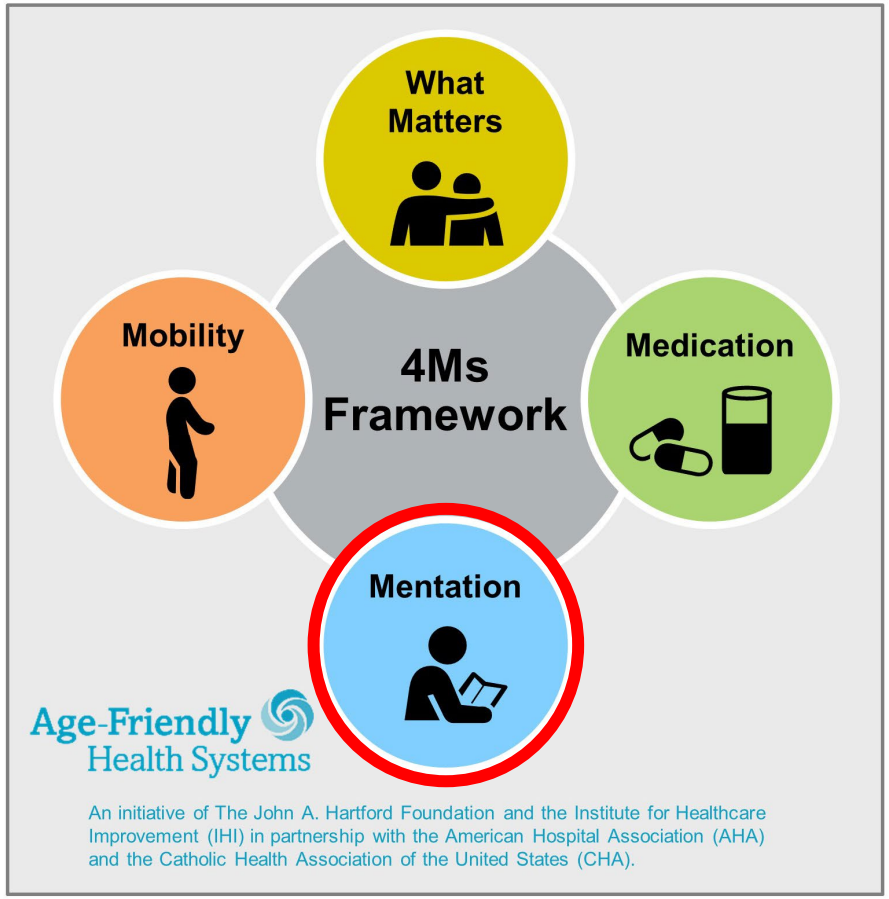
Cognition and Aging: What is Mentation?

- Mentation is one of the 4Ms that make up the framework for an Age-Friendly Health System
- Characterized by both cognition and mental health which can interact in complex and dynamic ways
- The brain must support these functions – some changes might be typical for aging while others can indicate pathological change



What Matters

Know and align care with each older adult's specific health outcome goals and care preferences including, but not limited to, end-of-life care, and across settings of care.

Medication

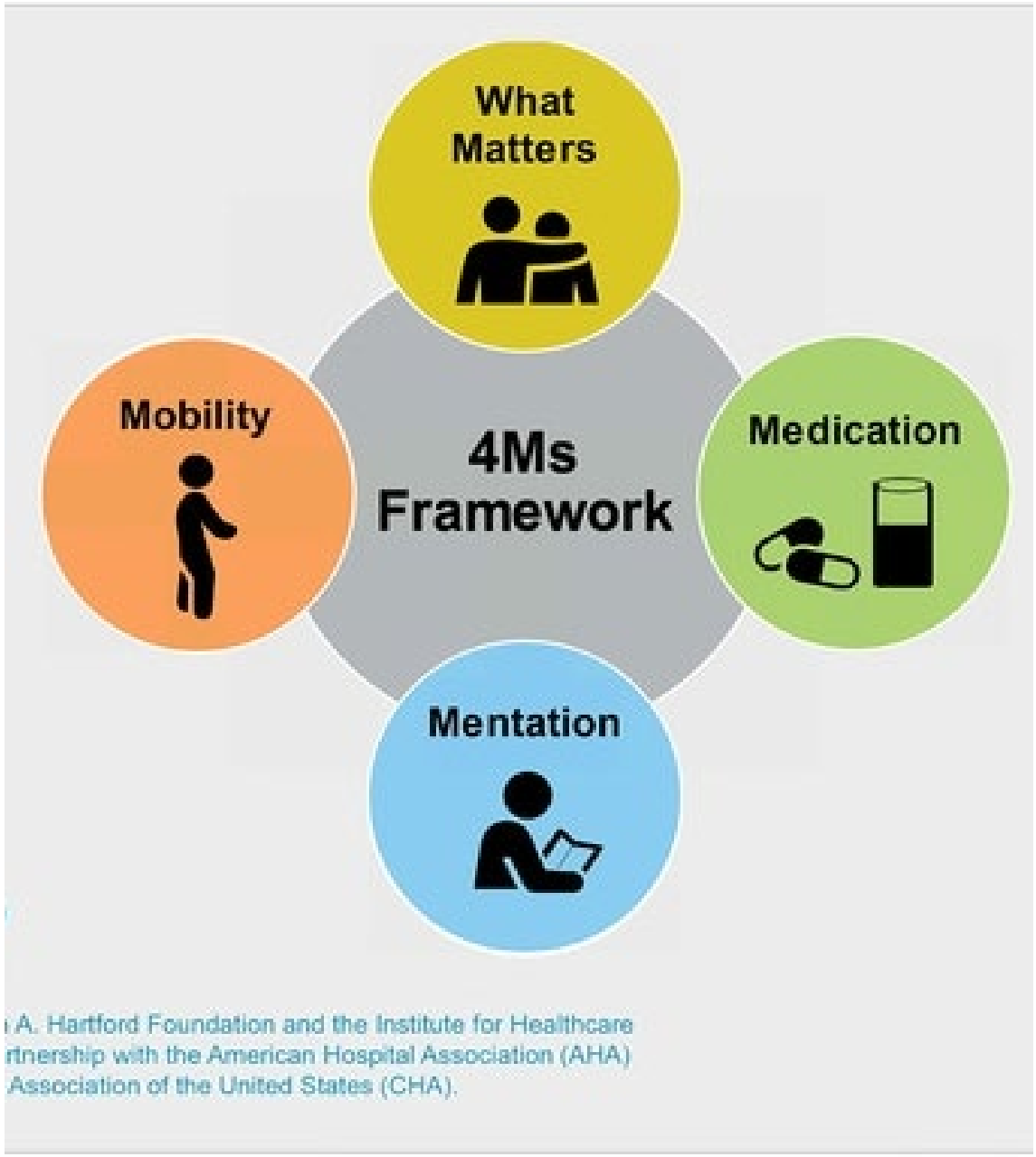
If medication is necessary, use Age-Friendly medication that does not interfere with What Matters to the older adult, Mobility, or Mentation across settings of care.

Mentation

Prevent, identify, treat, and manage dementia, depression, and delirium across settings of care.

Mobility

Ensure that older adults move safely every day in order to maintain function and do What Matters.



Brain Health in Aging

Flip our perspective

- Euro-centric, Western medicine has operated within a disease-focused framework
  - Identify the cause and stop it/fight it/treat it . . .
  - “Forward thinking” is to prevent it
- Person-centric care should be our real goal
  - Individualized health plans
  - What Matters for your quality of life, for your values, for what you care about?

Maintain Independence is top goal for most

- Keeping the Brain Healthy as we get older (Dementia Prevention) is critical

The Aging Brain

- Cellular molecular changes with aging
- Metabolic changes with aging
- Changes to nerve cells, DNA and cell structure
- Loss of sex hormones after mid-life changes
- Weakening of the body’s natural repair systems
- Changes in the immune system
- Telomeres: the long and the short of it

Can we cure dementia?
Can we prevent dementia?

Image: PenCLAHRC - NIHR

Approaches to Dementia Prevention

What are the top risk factors?

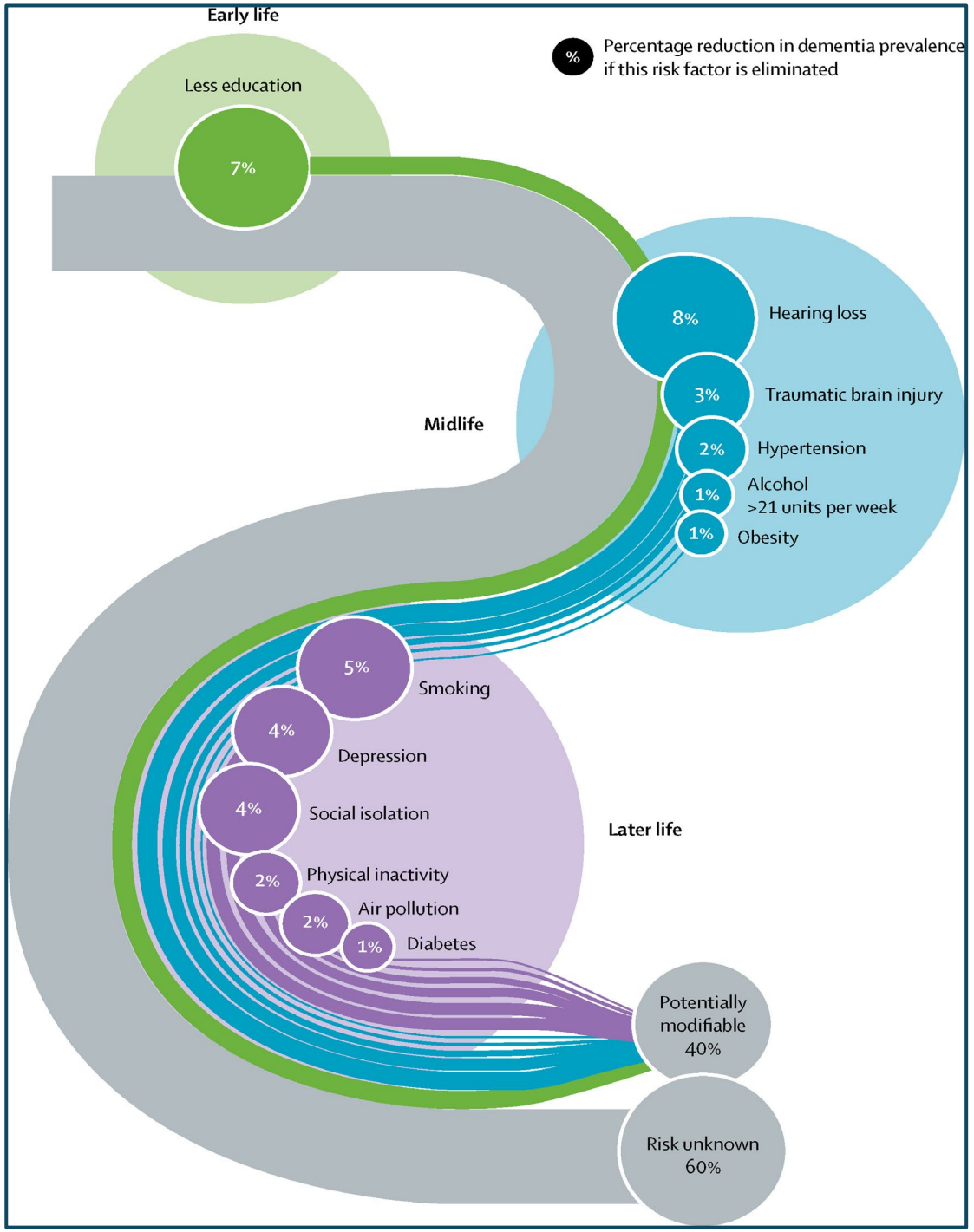
- Can’t change **age**
- Can’t change **genetics**
- Let’s focus on modifiable risk factors

Where to find reputable information?

Dementia prevention, intervention, and care: 2020 report of the Lancet Commission

Prof Gill Livingston, MD, Jonathan Huntley, PhD, Andrew Sommerlad, PhD, Prof David Ames, MD, Prof Clive Ballard, MD, Prof Sube Banerjee, MD, Prof Carol Brayne, MD, Prof Alistair Burns, MD, Prof Jiska Cohen-Mansfield, PhD, Prof Claudia Cooper, PhD, Sergi G Costafreda, PhD, Amit Dias, MD, Prof Nick Fox, MD, Prof Laura N Gitlin, PhD, Prof Robert Howard, MD, Prof Helen C Kales, MD, Prof Mika Kivimäki, FMedSci, Prof Eric B Larson, MD, Prof Adesola Ogunniyi, MBChB, Vasiliki Orgeta, PhD, Prof Karen Ritchie, PhD, Prof Kenneth Rockwood, MD, Prof Elizabeth L Sampson, MD, Quincy Samus, PhD, Prof Lon S Schneider, MD, Prof Geir Selbæk, MD, Prof Linda Teri, PhD, Naaheed Mukadam, PhD

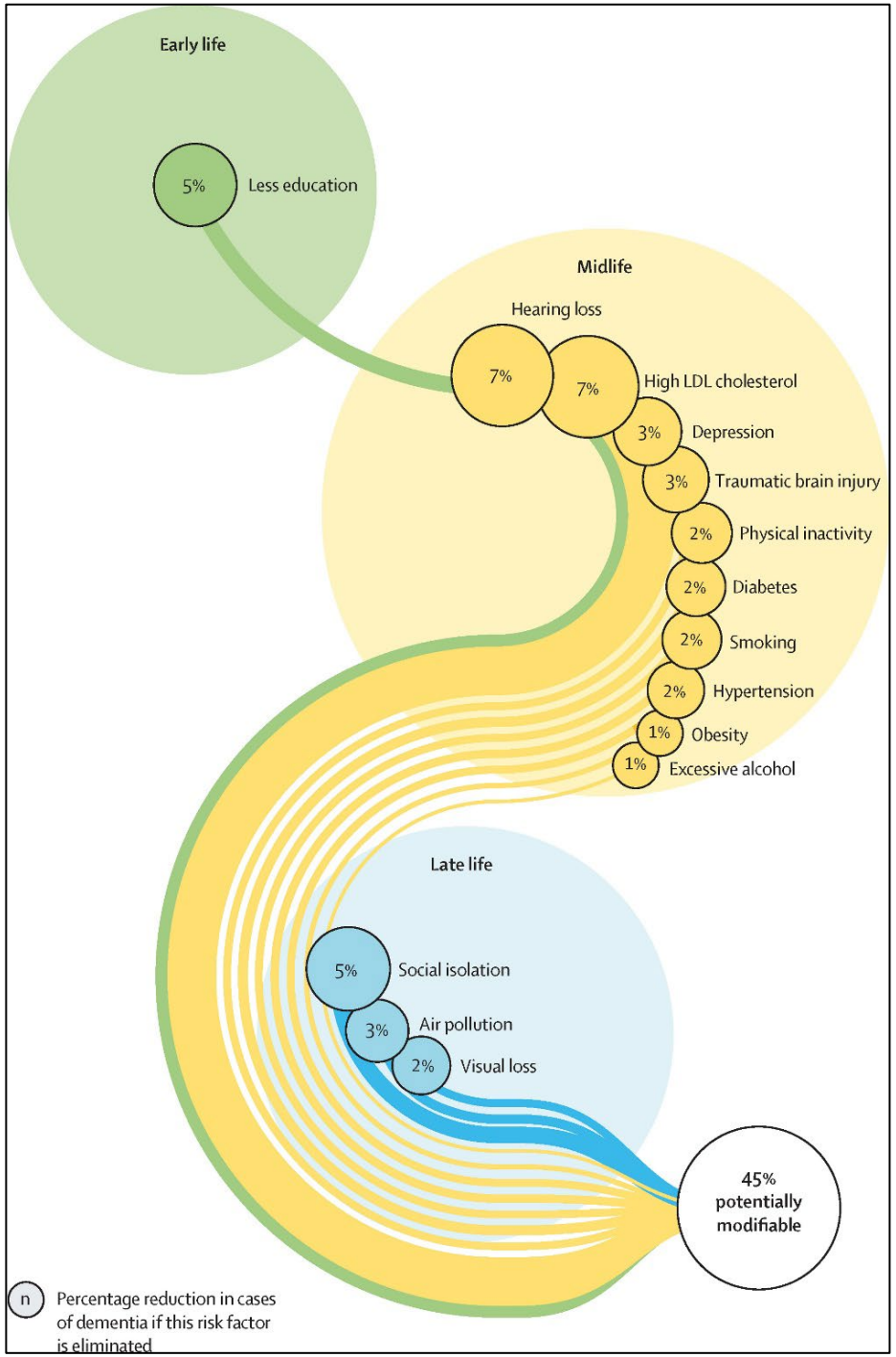
- *The Lancet* 2020 396413-446 DOI: (10.1016/S0140-6736(20)30367-6)

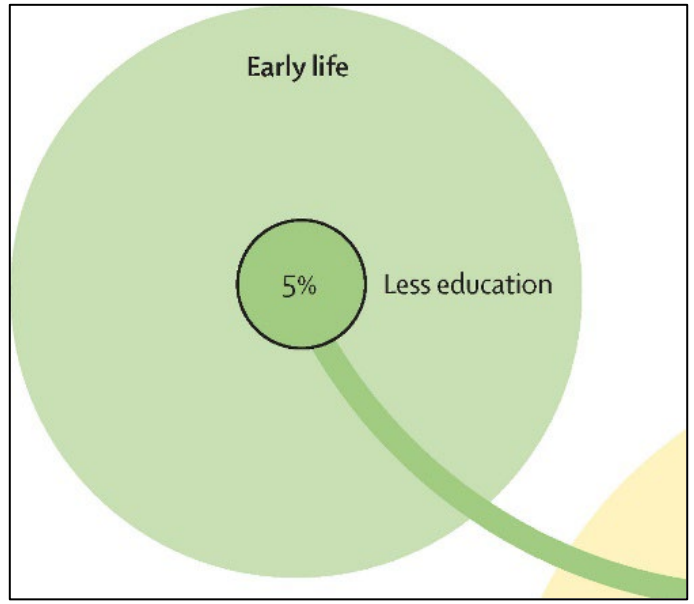


The Lancet Commissions

Dementia prevention, intervention, and care: 2024 report of the *Lancet* standing Commission

Gill Livingston, Jonathan Huntley, Kathy Y Liu, Sergi G Costafreda, Geir Selbæk, Suvarna Alladi, David Ames, Sube Banerjee, Alistair Burns, Carol Brayne, Nick C Fox, Cleusa P Ferri, Laura N Gitlin, Robert Howard, Helen C Kales, Mika Kivimäki, Eric B Larson, Noeline Nakasujja, Kenneth Rockwood, Quincy Samus, Kokoro Shirai, Archana Singh-Manoux, Lon S Schneider, Sebastian Walsh, Yao Yao, Andrew Sommerlad, Naaheed Mukadam**


Early life
5%
Less education
Midlife
Hearing loss
7%
7%
High LDL cholesterol
3%
Depression
3%
Traumatic brain injury
2%
Physical inactivity
2%
Diabetes
2%
Smoking
2%
Hypertension
1%
Obesity
1%
Excessive alcohol
Late life
5%
Social isolation
3%
Air pollution
2%
Visual loss
45%
potentially
modifiable
n
Percentage reduction in cases
of dementia if this risk factor
is eliminated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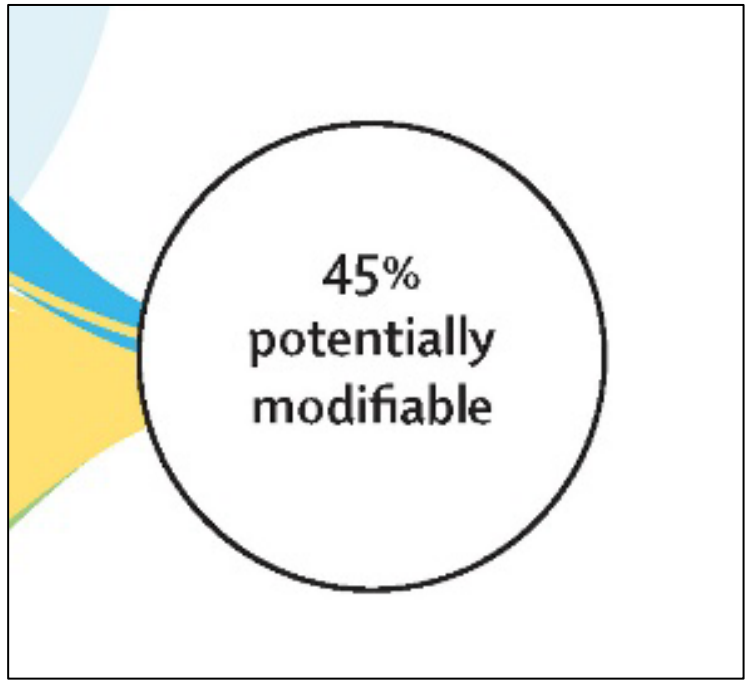
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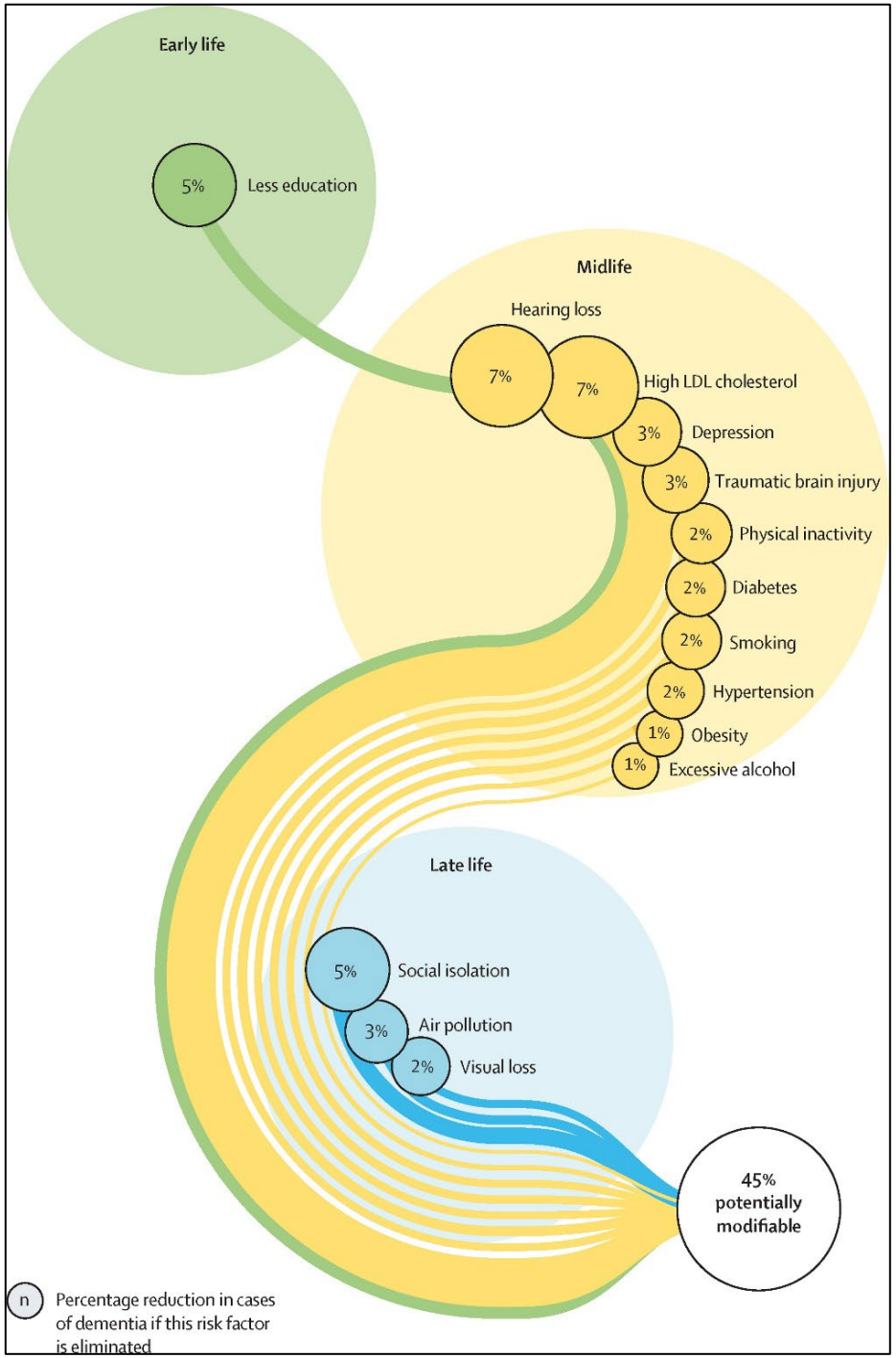
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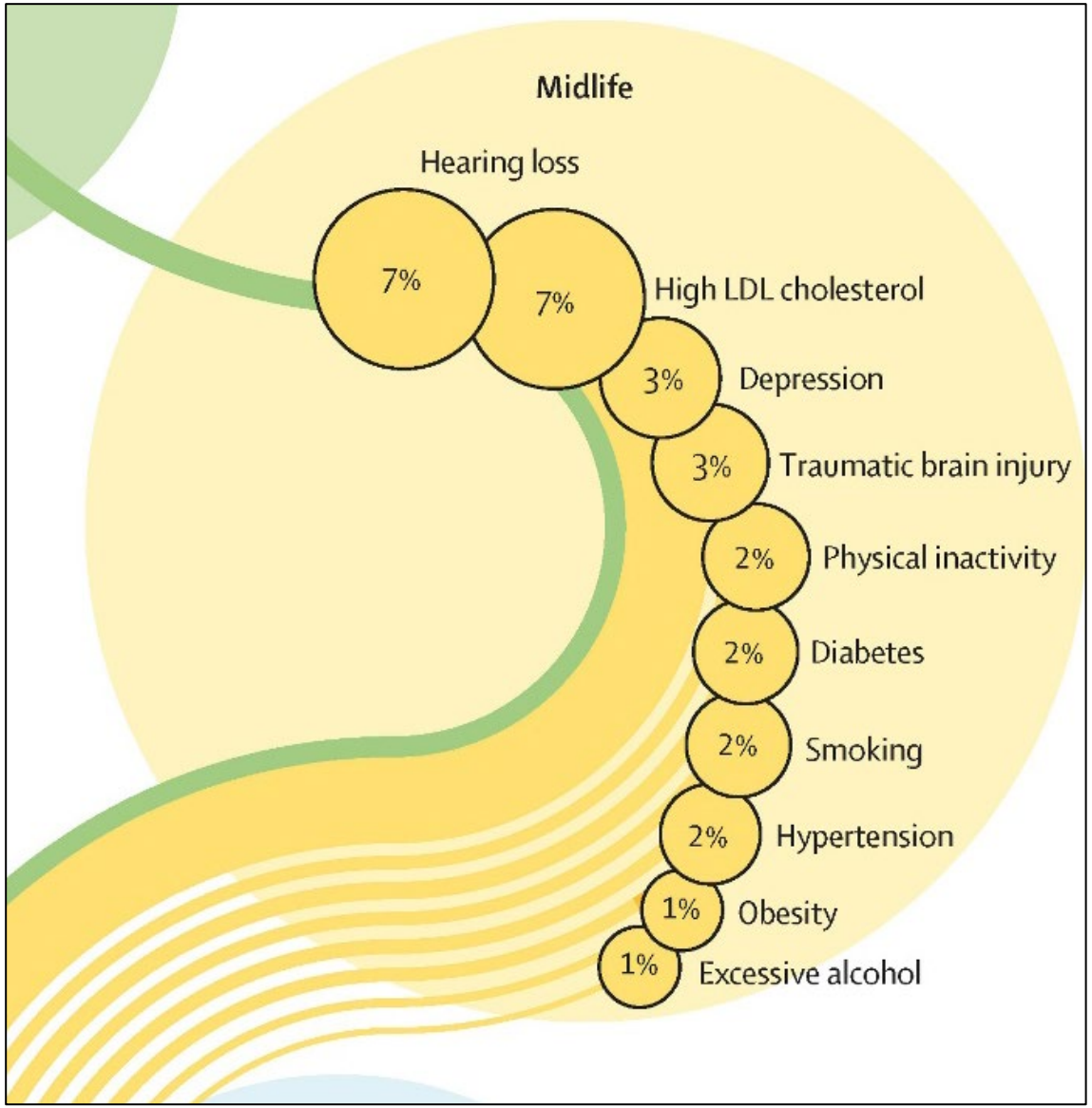
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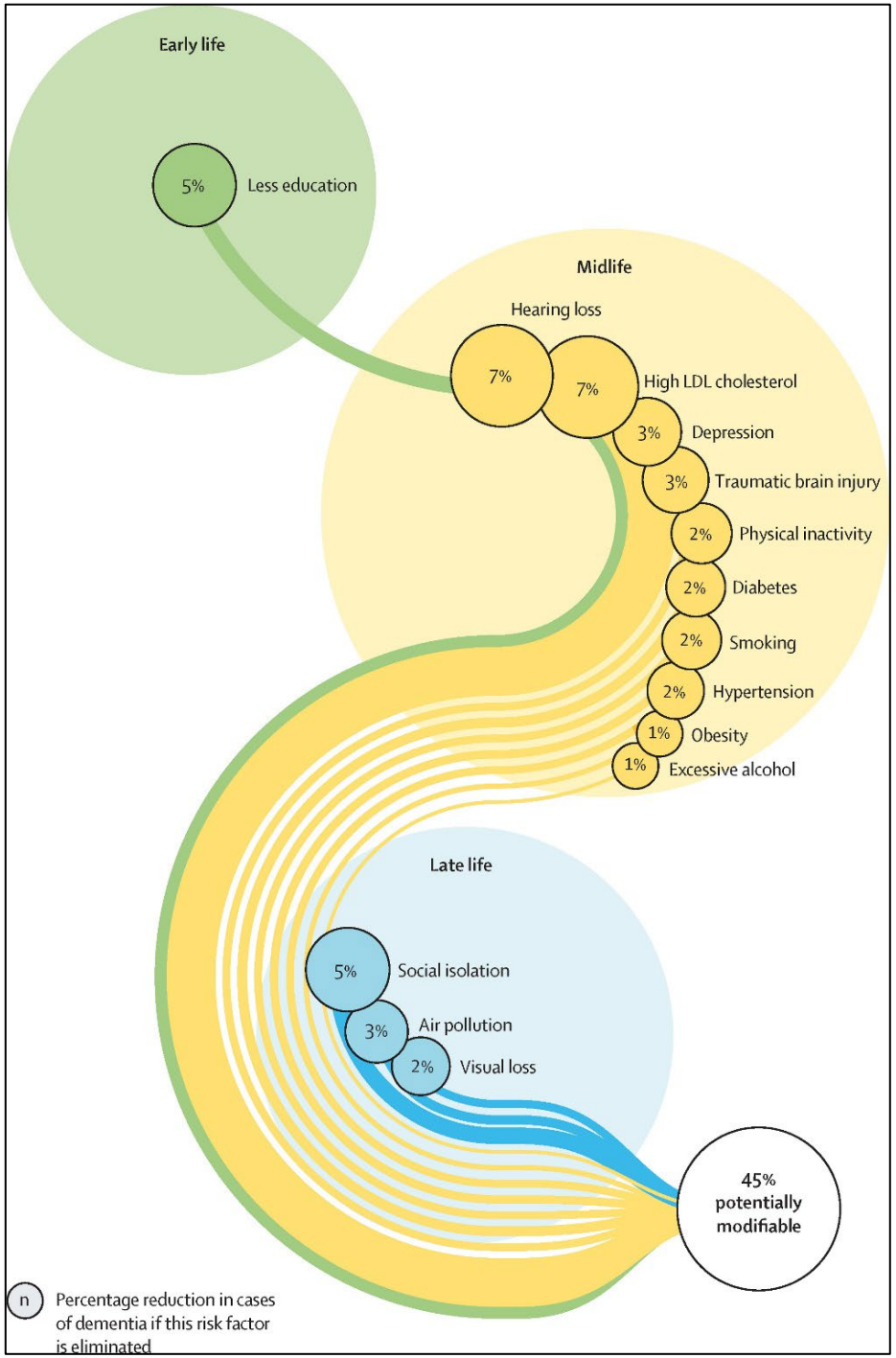
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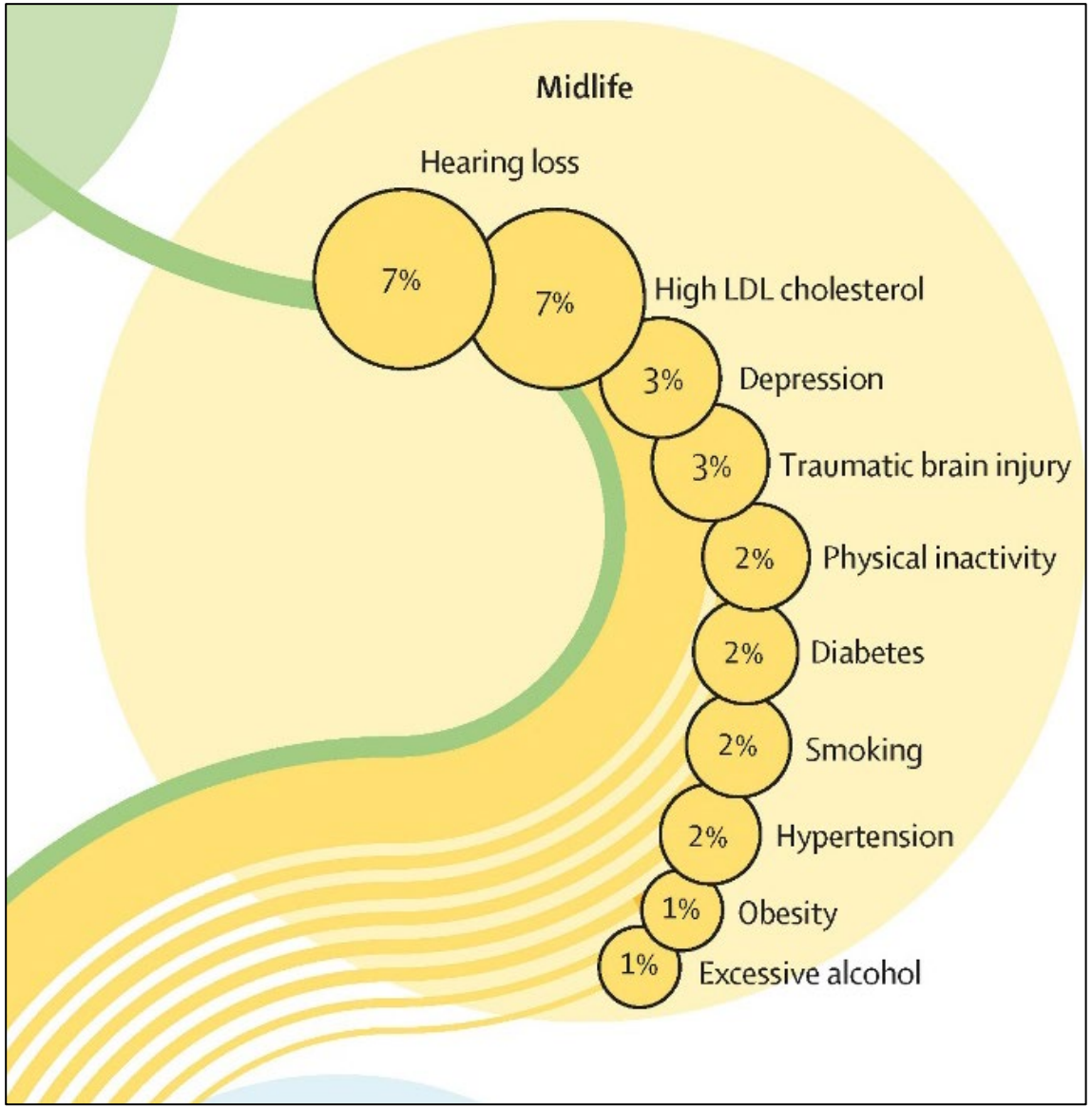
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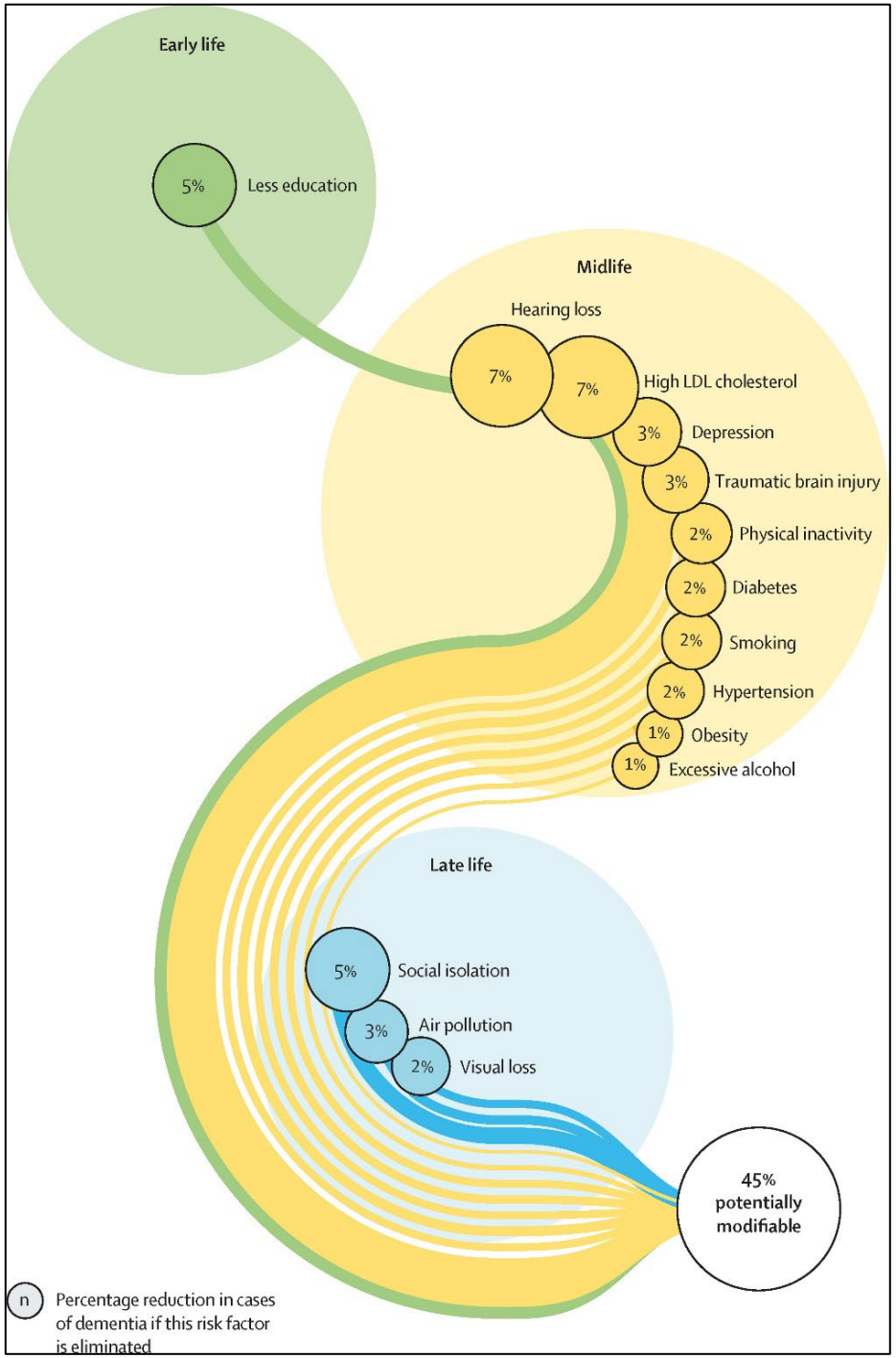
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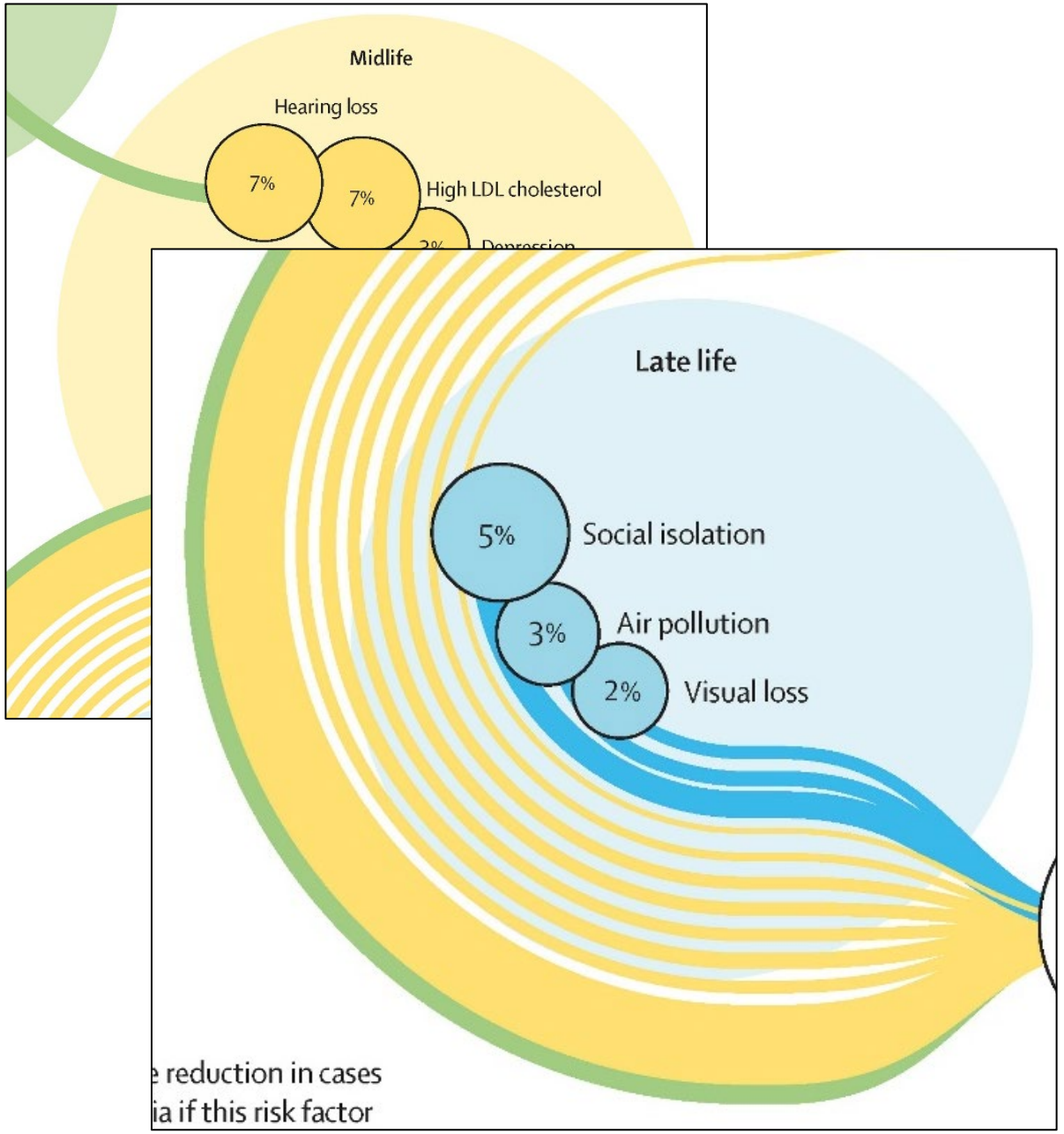
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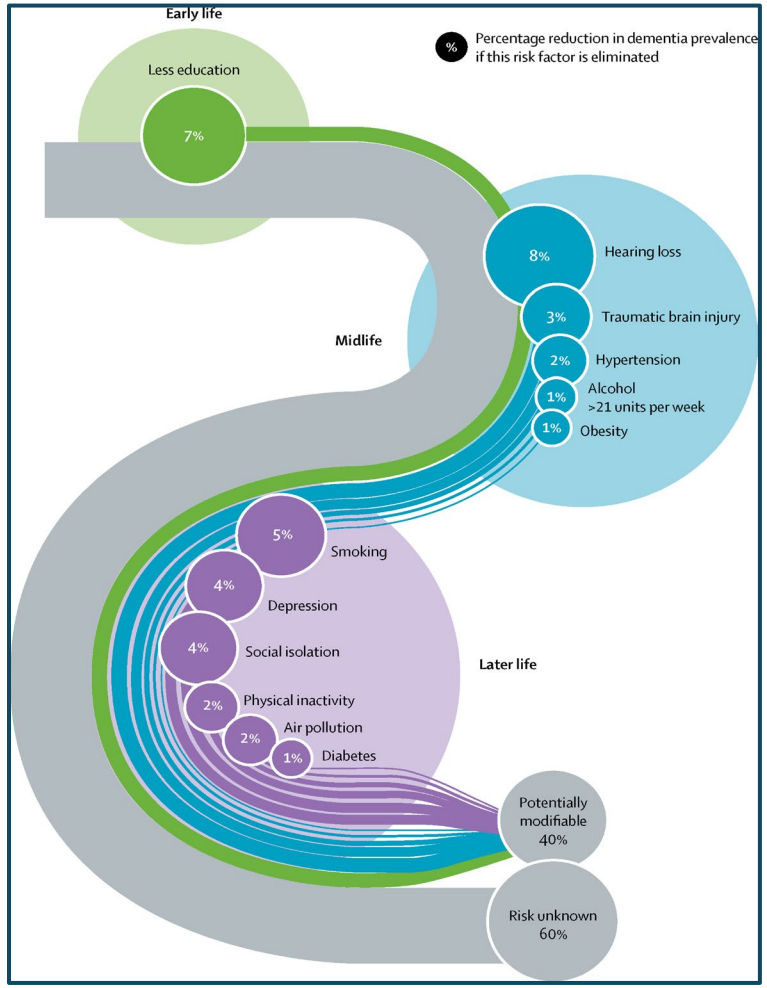
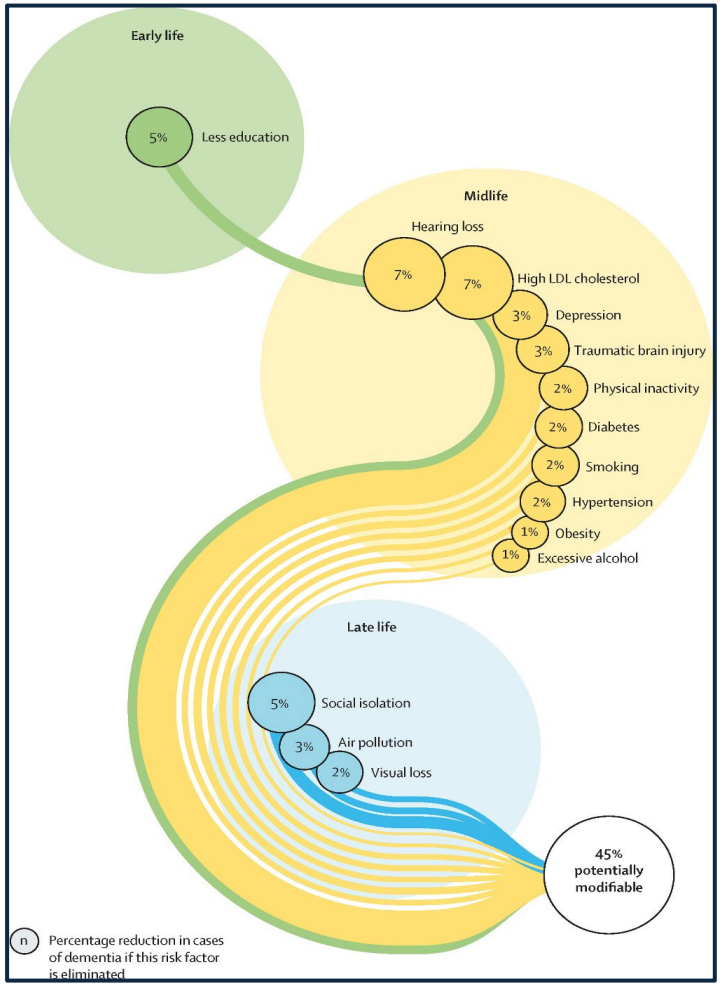
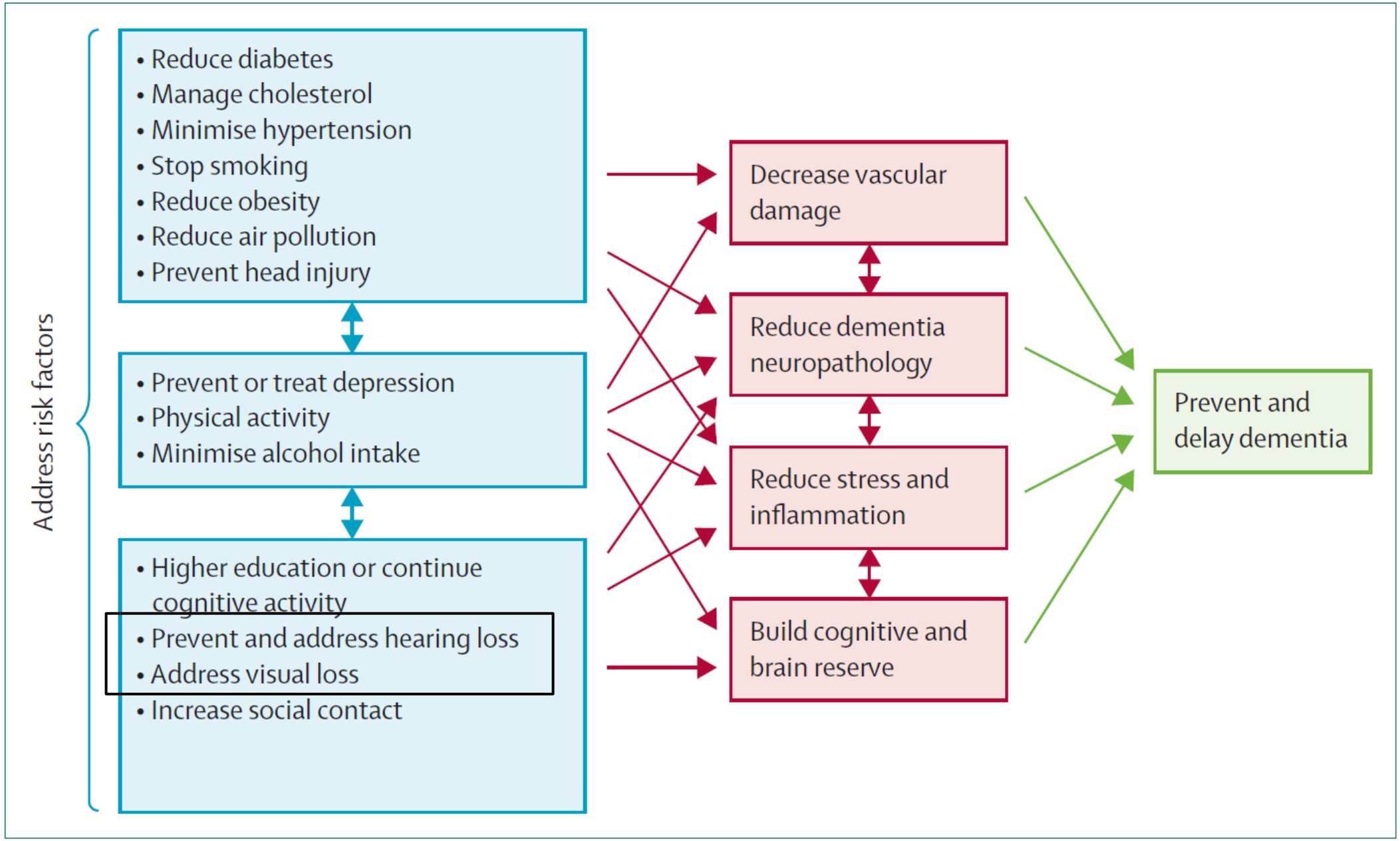
Key Differences and Lancet Summary Points

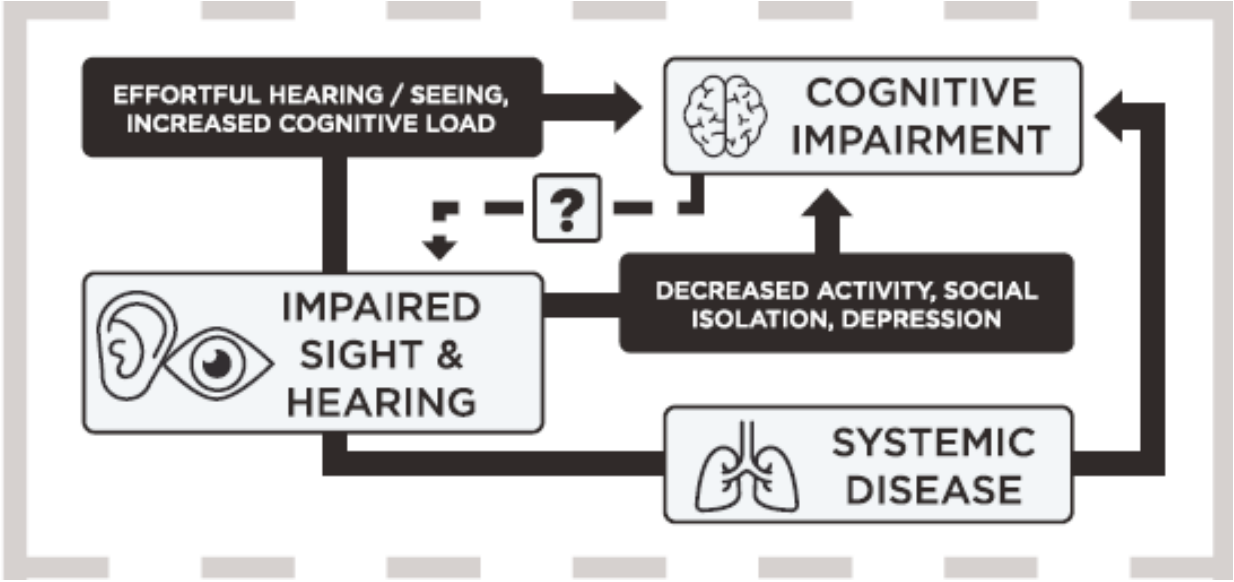





Address risk factors
• Reduce diabetes
• Manage cholesterol
• Minimise hypertension
• Stop smoking
• Reduce obesity
• Reduce air pollution
• Prevent head injury
• Prevent or treat depression
• Physical activity
• Minimise alcohol intake
• Higher education or continue cognitive activity
• Prevent and address hearing loss
• Address visual loss
• Increase social contact
Decrease vascular damage
Reduce dementia neuropathology
Reduce stress and inflammation
Build cognitive and brain reserve
Prevent and delay dementia

Interrelations of Vision and Hearing Loss with Cognitive Aging

- Reports of sensory-cognitive performance associations and the increase in strength of these associations with age span more than 60 years [1,2]
- Typical age-related changes in vision and/or hearing as well as impairments appear to adversely affect cognitive performance, are documented risk factors for cognitive impairment, dementia and its progression [3,4,5,6,7.]
- Intervention studies (e.g., cataract extraction, hearing aids, age-friendly - environmental accommodations, training, etc.) demonstrate positive effects on cognitive performance, dementia risk, and/or its progression [8]
- Mechanisms underlying sensory and brain health relationships and causal pathways remain to be fully understood
  - Loneliness/ Isolation
  - Depression
  - Reduced Activity, Participation

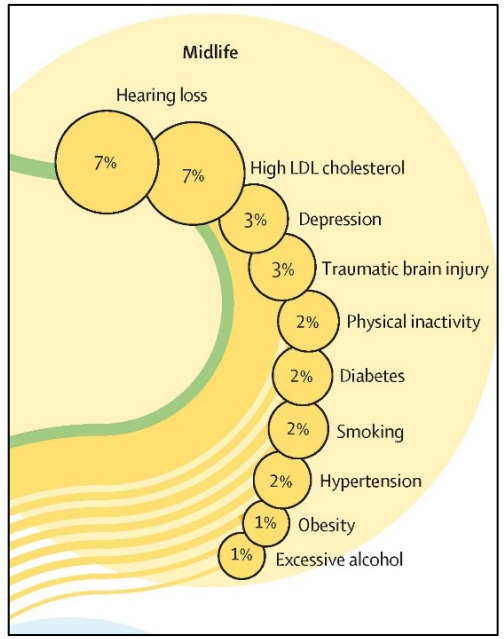


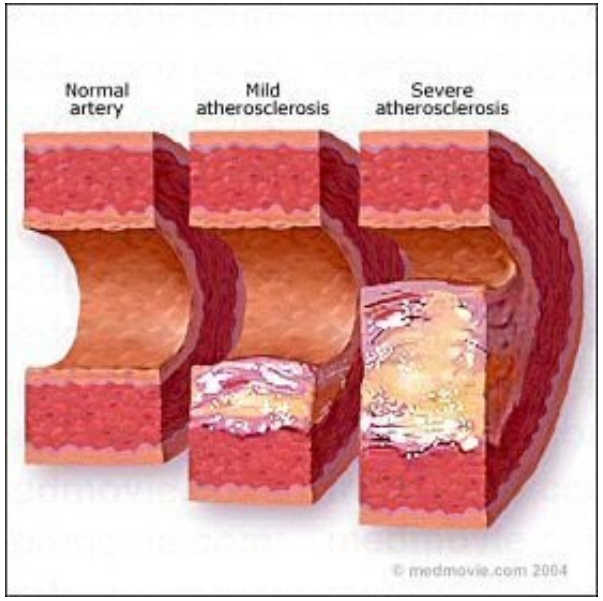
Abraham, A. G., Hong, C., Deal, J. A., Bettcher, B. M., Pelak, V. S., Gross, A., ... & Wittich, W. (2023).. *Journal of the American Geriatrics Society*

Vascular Disease

Hypertension/Atherosclerosis/High LDL Chol

- Longitudinal studies have suggested that high blood pressure in midlife is associated with a higher incidence of both AD and VaD in later life.
- Some studies suggest that hypotension; especially low diastolic blood pressure in late-life is also associated with an increased risk of AD.
- Long-standing hypertension may lead to severe atherosclerosis and impaired cerebrovascular autoregulation.
- Decline in BP in later life may contribute to diminished cerebral perfusion which may in turn lead to increased beta-amyloid





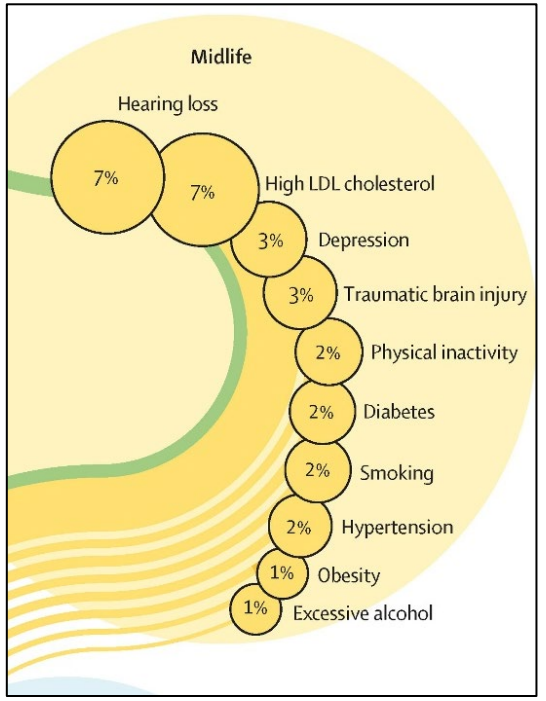
Kennelly, Lawlor, & Kenny, *Ageing Research Reviews*, 2009

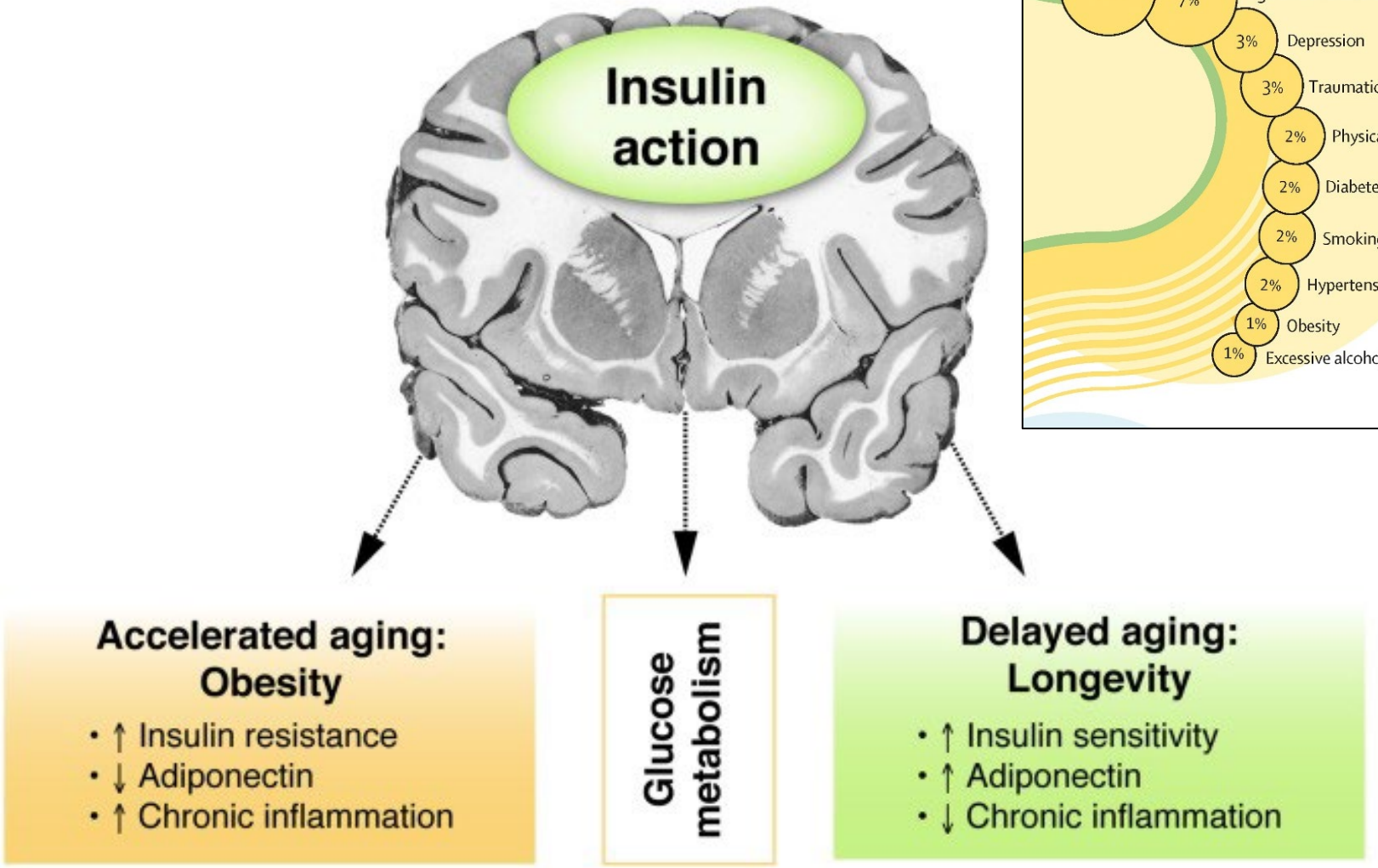
Obesity: Insulin and Glucose Metabolism

Putative relationship between central insulin action and glucose metabolism in models of accelerated or delayed aging.

Obesity as a model for accelerated aging is associated with peripheral insulin resistance, decreased adiponectin levels, and enhanced chronic inflammation.

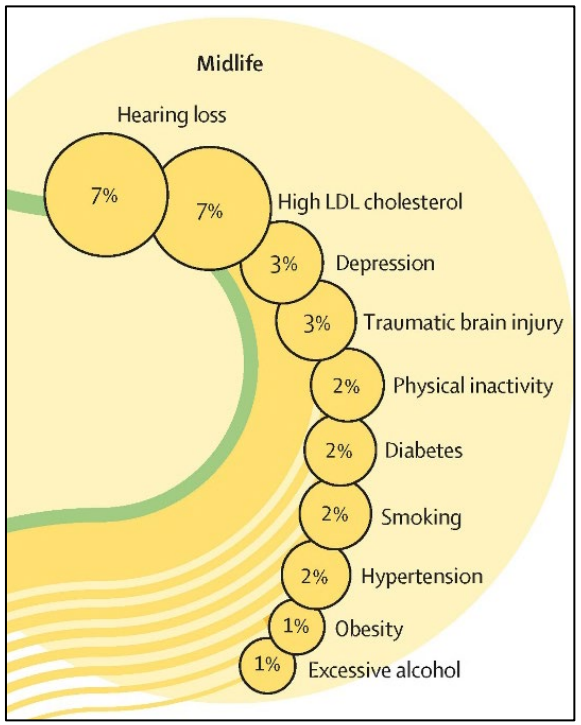
The opposite is observed in healthy longevity.

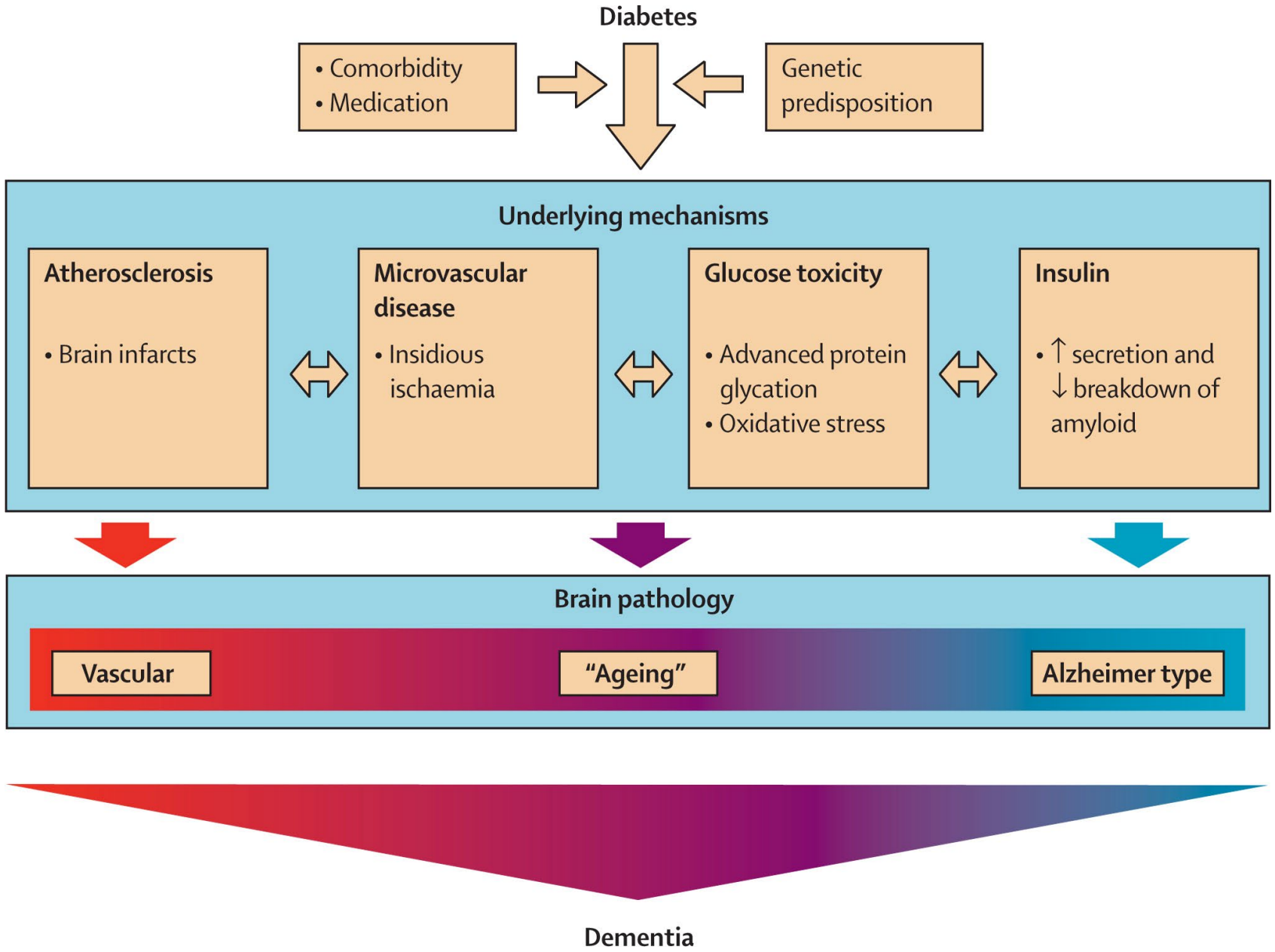




Akintola and van Heemst, Frontiers in Endocrinology, 2015

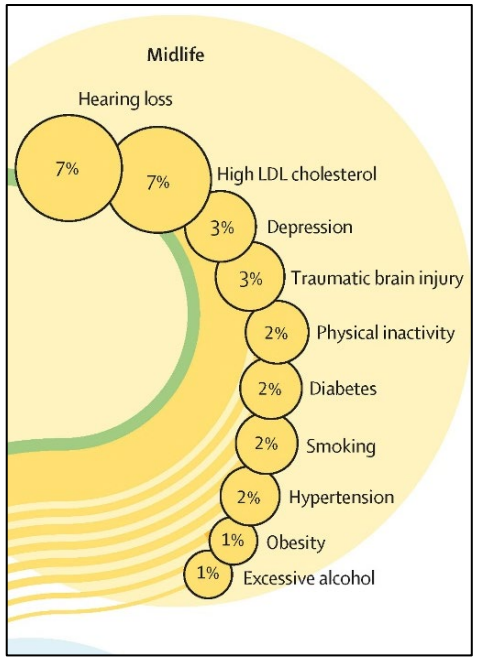
Diabetes





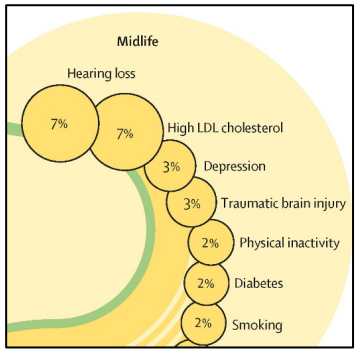
Biessels, et al., *Lancet Neurology*, 2006

Excessive Alcohol



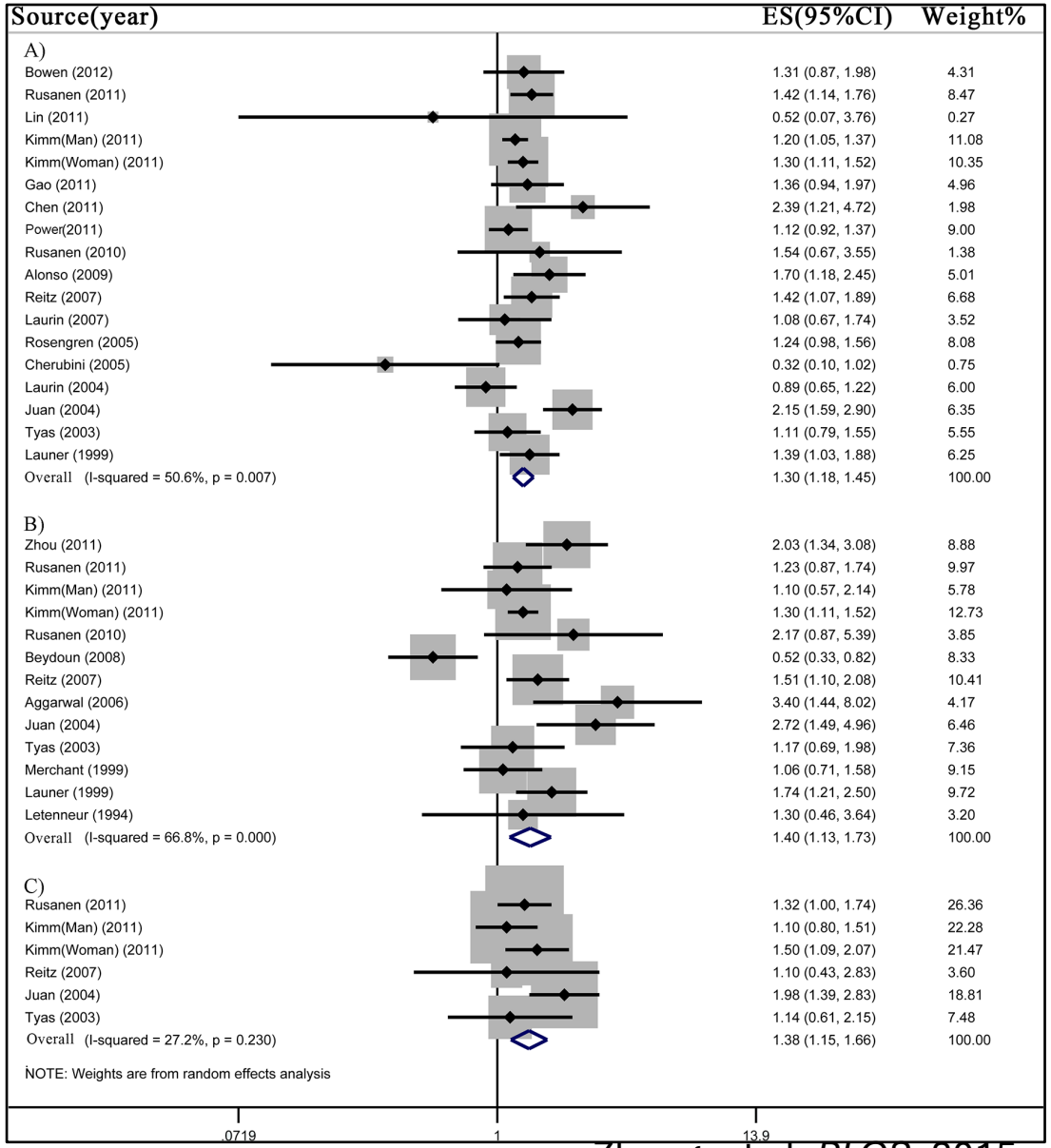
- **Alcohol can be a Primary or Secondary cause of dementia**
- Long-term, excessive drinking causes damage to the brain – resulting in impaired cognitive function
  - Alcohol-related dementia
  - Wernicke-Korsakoff syndrome
- Increases risk of common types of dementia (AD & VaD)
- Increases risk of stroke and heart disease
- 2-10% of older adults abuse alcohol or are alcohol dependent
- At-risk drinking found in ~15% of adults 65+
- Potential interaction of alcohol and medications
- Increases the risk of many other potential geriatric syndromes: falls, head injury, delirium
- **Drinking Limits are Stricter for Older Adults**

Farcnik & Persyko, *Can AD Review*, 2005; Rigler, *AmFamPhys*, 2000; Special Populations: Older Adults on www.niaaa.nih.gov



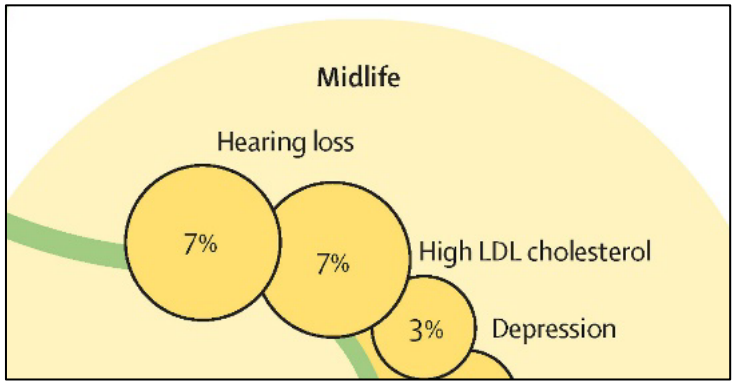
Smoking

- Prospective cohort studies (n=37 high quality)
- Versus never smokers, current smokers had an increased risk of all-cause dementia (risk ratio (RR) 1.30, 95% (CI) 1.18–1.45), AD (RR 1.40, 95% CI 1.13–1.73) and VaD (RR 1.38, 95% CI 1.15–1.66). For all-cause dementia, the risk increased by 34% for every 20 cigarettes per day (RR 1.34, 95% CI 1.25–1.43). Former smokers did not show an increased risk of all-cause dementia (RR 1.01, 95% CI 0.96–1.06), AD (RR 1.04, 95% CI 0.96–1.13) and VaD (RR 0.97, 95% CI 0.83–1.13). Subgroup analyses indicated that (1) the significantly increased risk of AD from current smoking was seen only in apolipoprotein E ε4 noncarriers; (2) current smokers aged 65 to 75 years at baseline showed increased risk of all-cause dementia and AD compared to those aged over 75 or under 65 years; and (3) sex, race, study location and diagnostic criteria difference in risk of dementia was not found.
- **Smokers had an increased risk of dementia, and smoking cessation decreases the risk to that of never smokers.**
- **Current smoking increased risk of AD in ApoE e4-**
- **Survival bias and competing risk reduce the risk of dementia from smoking at extreme age.**



Zhong, et al, *PLOS*, 2015

Mental Health Conditions



Depression

- Early-onset depression before age 65 years and recurrent depression, may constitute long-term risk factors for development of dementia
- Late-onset depressive symptoms may be a feature of prodromal phase of dementia
- Recent studies suggest that long-term treatment with antidepressants may decrease the risk
  - Kessing, Curr Opin Psychiatry, 2012

Post-traumatic stress disorder

- Double the risk in Veteran groups studied
  - Yaffe, et al, 2010; Quereshi, et al, 2010

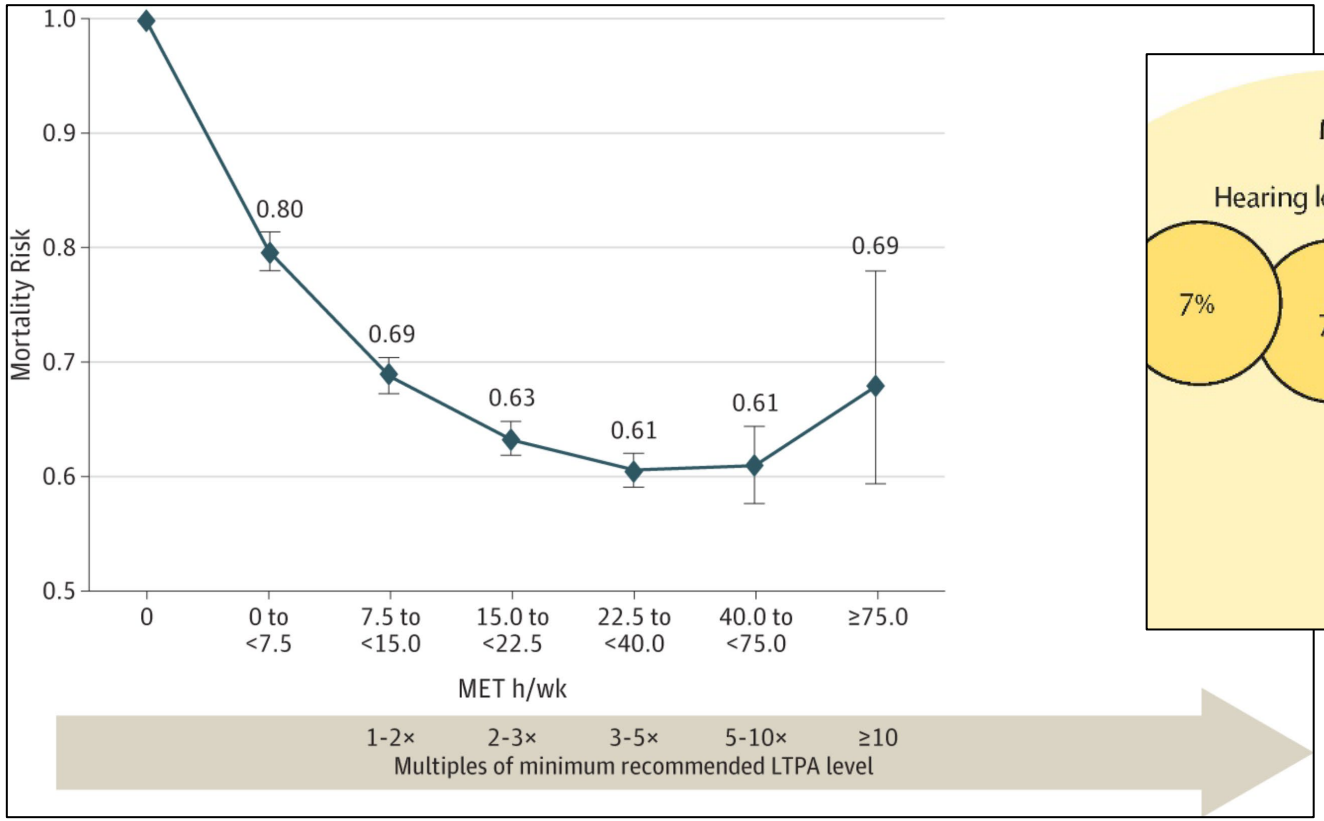
Anxiety

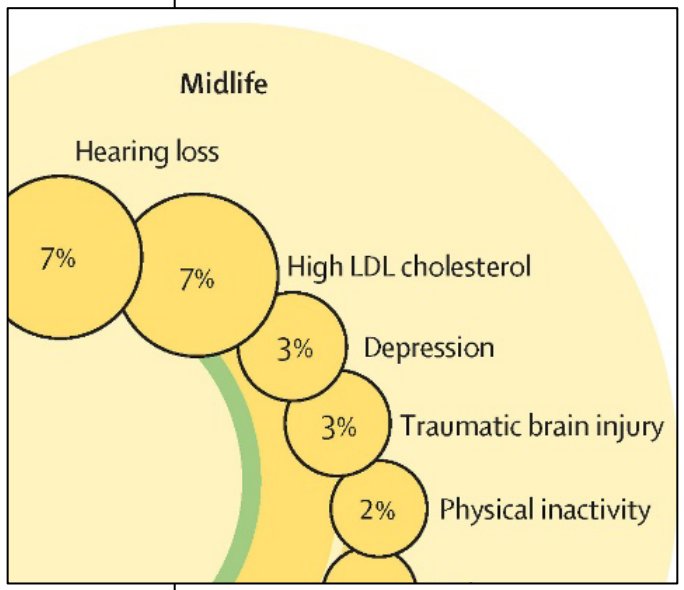
- Rotterdam Study - de Bruijn, et al, Am J Geriatr Psychiatry, 2014
- Not associated with the risk of dementia or cognitive decline

Image: www.socialworker.com

Physical (In)Activity

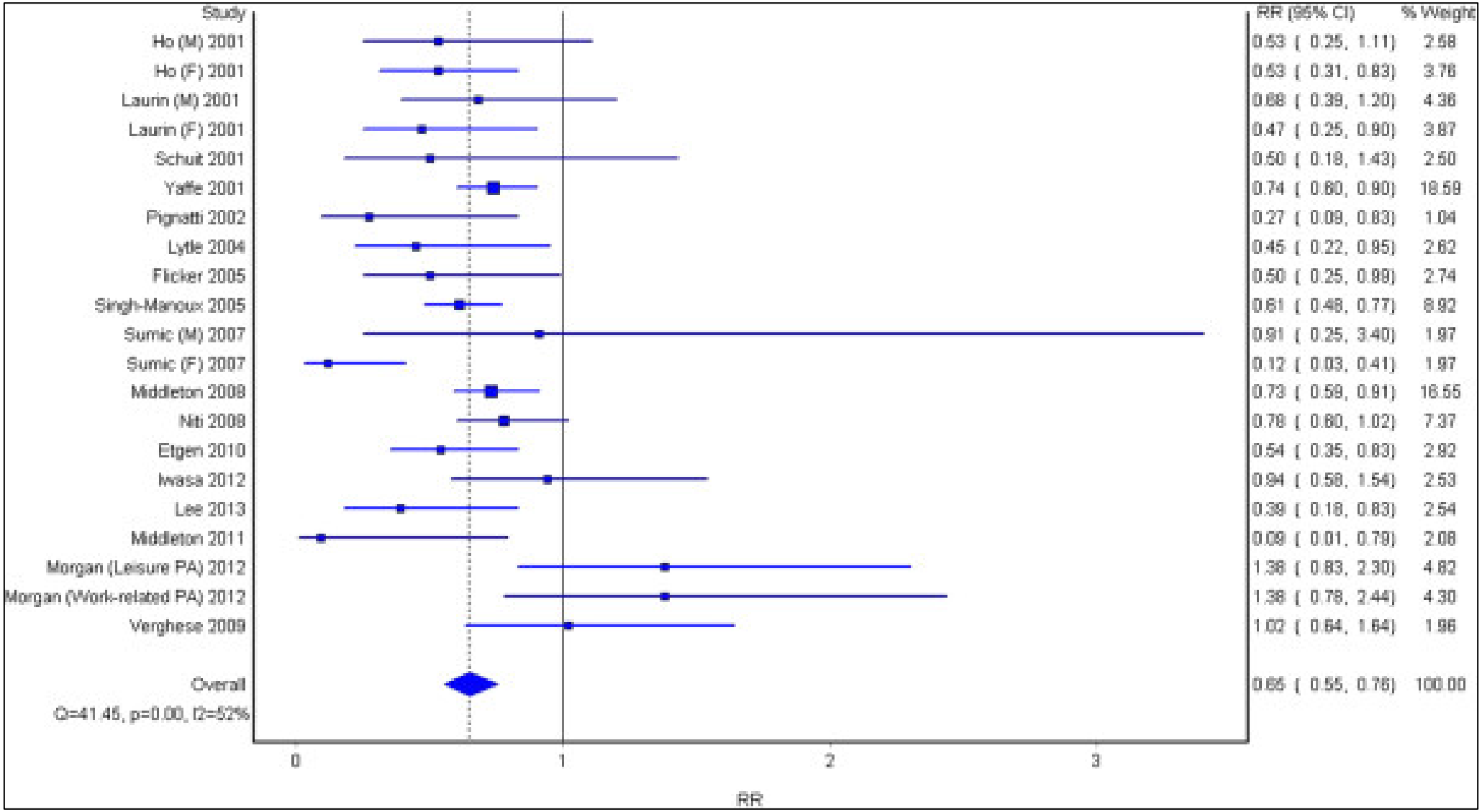
- 2008 Physical Activity Guidelines recommended 75 vigorous or 150 moderate intensity min/weekly (7.5 METS weekly)
- Dose response? Pooled analysis of 6 prospective, pop-based studies
- N > 660,000; Median age = 62 (range 21-98); > 116,000 deaths over 11 years
  - Cox Proportional Hazards Regression for overall mortality; Similar for cardiovascular and cancer-related deaths; Model adjusted for gender, smoking, alcohol use, education, marital status, BMI, and medical comorbidities





Arem, et al, *JAMA Int Med*, 2015

Physical Activity in Older Adults



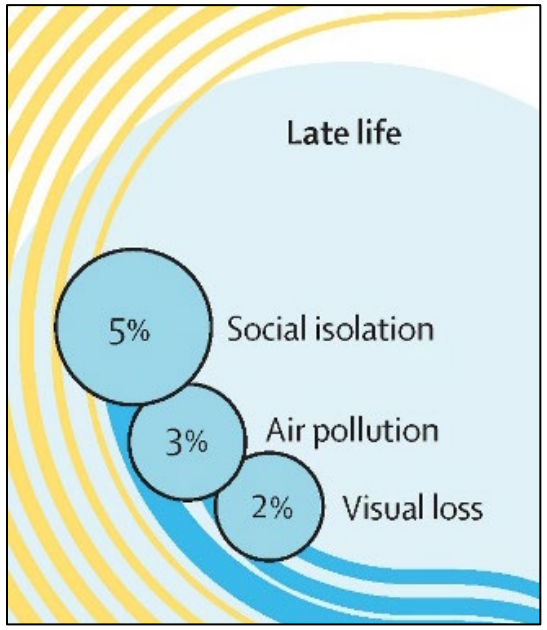
Blondell, Hammersley-Mather, & Veerman, *BMC Pub Health*, 2014

Alas . . .

- RCTs of aerobic exercise programs for NC people 55+ which measured effects on both fitness and cognition. Comparison to wait list or other non-aerobic activity
  - 12 trials including 754 participants met inclusion criteria.
  - Eight of the 12 trials reported that the aerobic exercise interventions resulted in increased fitness of the trained group.
- When results were combined across trials, no significant benefits of aerobic exercise or increased fitness on any aspect of cognition.
- Many included trials had problems with their methods or reporting which reduced confidence in the findings.
- No evidence that aerobic exercise or increased fitness improves cognitive function in older people.
- However, it remains possible that it may be helpful for particular subgroups of people, or that more intense exercise programs could be beneficial.

Young, et al, *Cochrane Rev*, 2015

Social Interaction



Numerous studies have found associations between healthy brain aging and social interaction

- Rush Memory and Aging Project (MAP): a longitudinal, epidemiological clinical–pathological study (for this study, n=89 older adults without known dementia at baseline and with brain autopsy data).
- Baseline questions about social network size and uniform structured clinical assessments including the following: medical history, neurological examination, and neuropsychological performance.
- Covariates included cognitively stimulating activities, physical activities, social activities, and seven common chronic diseases.
- The results indicate that even when participants demonstrated severe levels of global disease pathology, cognitive performance remained higher for participants with larger network sizes even after controlling for covariates.

Bennett, et al, 2006

What else do you think of?
Anything seem to be missing?

https://www.health.harvard.edu/blog

Sleep

Short Sleep Duration:

- Studies indicate that consistently getting less than 7 hours of sleep, especially in middle age (50s and 60s), may increase the risk of developing dementia later in life.
- Some evidence that excessive sleep in later age is associated with risk of dementia (or perhaps an early symptom?)

Sleep Quality:

- Recent studies suggests that sleep quality, rather than just the amount of sleep, may play a crucial role in dementia development decades before symptoms appear.

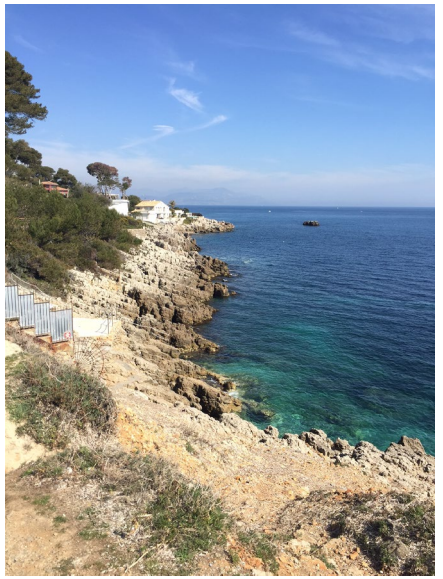
Sleep Disorders:

- Sleep disorders, like sleep apnea, are also linked to an increased risk of dementia, and sleep-related movement disorders increase the risk of all-cause dementia.

Bidirectional Relationship:

- Some researchers believe that the relationship between sleep and dementia is bidirectional, meaning that poor sleep might increase dementia risk, and dementia might also lead to sleep problems.

Nutrition



Mediterranean-DASH Intervention for Neurodegenerative Delay

- MIND Diet
- High intake of vegetables, fruits, nuts, legumes, and unrefined grains
- High intake of olive oil, but low intake of saturated fats
- Moderately high intake of fish
- Low intake of dairy, meat, and poultry

- Observational studies: In addition to reduced mortality, reduced chronic disease, including cardiovascular disease[1] – increased healthy aging[2]
- Cochrane Review: n=11 trials (52k+) demonstrated limited evidence[3]
- Review of studies with strict reduction in fat intake (cohort and RCTs): limited evidence for reduction in cardiovascular events, breast CA, and type 2 diabetes[4]

1. Trichopoulou, et al, N Engl J Med, 2003, 2. Samieri, et al, Ann Intern Med, 2013, 3. Rees, et al, Cochrane Reviews, 2013, 4. Bloomfield, et al, Ann Int Med, 2016

MIND Diet

BRAIN HEALTHY MEAL PLAN RECOMMENDATION

PACIFIC NEUROSCIENCE INSTITUTE®

THE **MIND** DIET

15 dietary components: 10 brain-healthy foods to focus on; 5 food groups to limit

HEALTHY FOOD GROUPS

AT LEAST **THREE SERVINGS** OF WHOLE GRAINS EACH DAY

AT LEAST **ONE SERVING** OF GREEN LEAFY VEGETABLES & **ONE** OTHER VEGETABLE EACH DAY

BERRIES AT LEAST **TWICE** A WEEK

AT LEAST **FIVE** ONE-OUNCE **SERVINGS** OF NUTS A WEEK

BEANS OR LEGUMES AT LEAST **FOUR TIMES** A WEEK

FISH AT LEAST **ONCE** A WEEK

Avoid high-mercury fish:
Mackerel (King), Marlin, Orange Roughy, Shark, Swordfish, Tilefish, Ahi Tuna

POULTRY AT LEAST **TWICE** A WEEK

USE OLIVE OIL AS ADDED FAT

NO MORE THAN **ONE GLASS** OF WINE A DAY

In addition, with clinical guidance, add nutrients such as Omega-3 fatty acids and curcumin; monitor Vitamin D and B12 levels.

FOOD GROUPS TO LIMIT

RED MEAT **LESS THAN FOUR** TIMES A WEEK

Including beef, pork, lamb, and products made from these meats

NO MORE THAN ONE TABLESPOON A DAY OF BUTTER OR MARGERINE

CHEESE & FRIED FOOD/ FAST FOOD **NO MORE THAN ONCE** A WEEK

LIMIT PASTRIES AND SWEETS TO **LESS THAN FIVE** TIMES A WEEK

Flipping perspective & Responding to patients

Keeping up with the latest news flash or fad

Omega 3 fatty acid

- Why? Diets high in omega-3 long-chain polyunsaturated fatty acids (PUFA) may protect people from cognitive decline and dementia.
- Direct evidence on the effect of omega-3 PUFA on incident dementia is lacking.
- Trials showed no benefit of omega-3 PUFA supplementation on cognitive function in cognitively healthy older people.
- Omega-3 PUFA supplementation is generally well tolerated with the most commonly reported side-effect being mild gastrointestinal problems.
- Longer-term studies may identify greater change in cognitive function in study participants which may enhance the ability to detect the possible effects of omega-3 PUFA supplementation in preventing cognitive decline in older people.

Sydenham, Dangour, and Lim, Cochrane Review, 2012

Tips for talking to your patients

#1 Be Composed

- Try to avoid a strong positive or negative response
- Keep up with the literature
- Pay attention to the popular press
- Show, don’t tell, when providing education
- The “inverted U” or “J-shaped curve” when discussing doses
- Provide guidance on where to find reputable information
- Big claims and asking for big money? Get suspicious
- HOPE – don’t squash it

Aging & Cognition Education (ACE) Workgroup

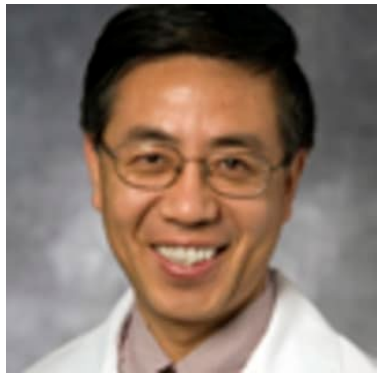
- A collaboration of education leaders from several VA Geriatric Research, Education, and Clinical Centers (GRECCs)
- Workgroup is tasked with developing practical education materials related to aging and geriatrics for VA staff who care for older Veterans
- GRECC Associate Directors of Education and Evaluation serve as the points of contact to help with distribution of these materials in addition to national workforce programs (i.e., Geriatric Scholars, Rural Interdisciplinary Team Training)

https://www.va.gov/grecc/pages/GRECC_Educational_Events_and_Products.asp

Current ACE Members

Emily Trittschuh, PhD
VA Puget Sound GRECC

Julie Moorer, RN
VA Puget Sound GRECC



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Birmingham-Atlanta GRECC

Carmen Fernandez, PsyD
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Christine Gould, PhD, ABPP
Palo Alto GRECC

Past Members

Steven Thielke, MD
Susan Cooley, PhD
Terri Huh, PhD, ABPP
Theressa Burns, OTR/L
Kathy Horvath, PhD/RN
Suzanne Craft, PhD
Nina Tumosa, PhD

History

- Almost 20 years ago, this group began as the Dementia Education Workgroup (DEW) to complement the Dementia Education Training (DET) workgroup
- A key early product was the Delirium-Dementia-Depression (3Ds) Card
- 3Ds card has been revised twice and is a regular component in VHA workforce training toolkits from the previously ORH-funded Rural Interdisciplinary Team Training (RITT) and the Geriatric Scholars Program

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Routledge
Taylor & Francis Group

Dissemination Strategies: The Evolution of Learning Resources on the Evaluation of Delirium, Dementia, and Depression

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Check for updates

Reevaluation of a clinical resource for assessment of delirium, dementia, and depression

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ABSTRACT

There is a perennial need to extend geriatrics knowledge and expertise to primary care providers to meet the unique needs of older patients. Reaching the target population of providers in an effective manner presents challenges for educators and evaluation of education programs. Gaps in a previous dissemination of an Assessment Guide for delirium, dementia, and depression were addressed through a multimodal strategy to reach a greater proportion of the intended audience, primary care clinicians, and to further evaluate the clinical impact of this learning resource. Sixty-five health care providers completed a forced choice online questionnaire. The majority of respondents were primary care providers (62.5%) who used the Assessment Guide in clinical activities such as patient assessment and patient education. Semistructured interviews with selected key informants (N = 16) provided examples of clinical impact such as improved diagnosis and changes in medication.

KEYWORDS
Delirium; dementia; depression; evaluating learning; learning strategies

As the largest health care system in the United States, the Veterans Health Administration (VHA) has the responsibility to be a leader in addressing the many challenges of providing effective and timely health care. A key mission of VHA's Geriatric Research, Education, and Clinical Centers (GRECCs) is to provide quality geriatrics education for VHA providers (Shay, Tumosa, & Thielke, 2011). Despite gains in the training of geriatric specialists, there are persistent needs to extend specialized knowledge and skills in geriatrics to primary care providers and other clinical staff (Institute of Medicine, 2008; Thielke, Tumosa, Lindenfeld, Shay, 2011). However, continuing education for health care providers faces the perennial challenges of time and cost constraints, as well as the challenges of meeting the needs of adult learners who are a diverse audience with regard to preferred learning modalities (Clark, Fitzgerald, Griffith, & Weir, 2011). Distance education has always been a source of learning opportunities in a national health system and now is expanding in response to these many challenges (Kresevic, Burant, Denton, Heath, & Kyproiotakis, 2011).

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Method of Development for Patient- or Provider-Facing Education Tools

Utilize an **iterative process** to develop and refine

Query multiple perspectives at researcher level, frontline clinician level, etc

Seek input from **Subject Matter Experts (SMEs)** if topic to be including might not have a SME represented within ACE workgroup

Incorporate findings from **research literature**

Seek review from **VA Operational Partners** (GEC, OMHSP)

Utilize station **Veterans Health Education Committee (VHEC)** review and graphics assistance from VHA **Medical Media**

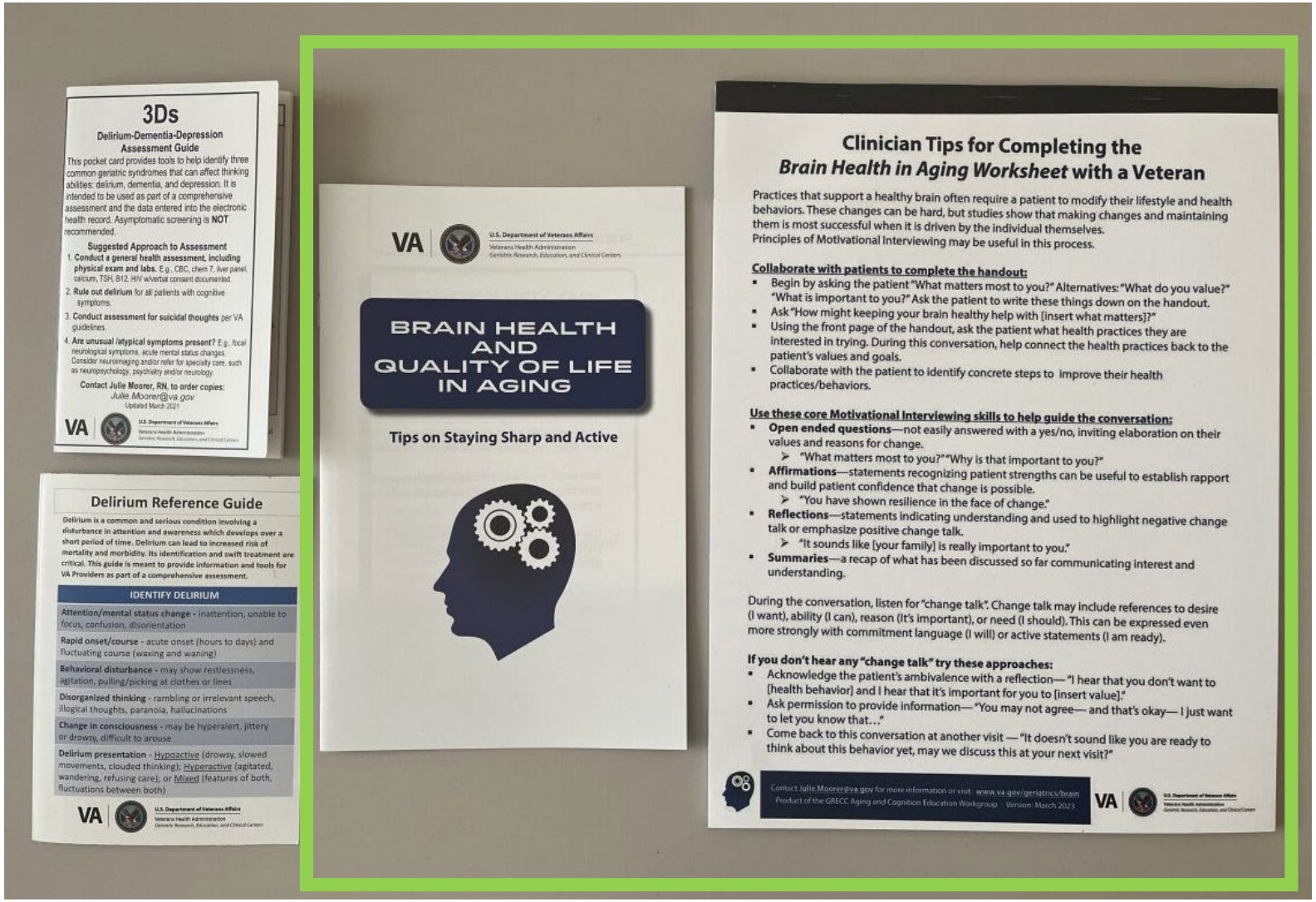
Overview of Education tools

Pocket Cards for Health Care Professionals

- ***3Ds: Dementia, Delirium, and Depression***
- ***Delirium Resource Card***

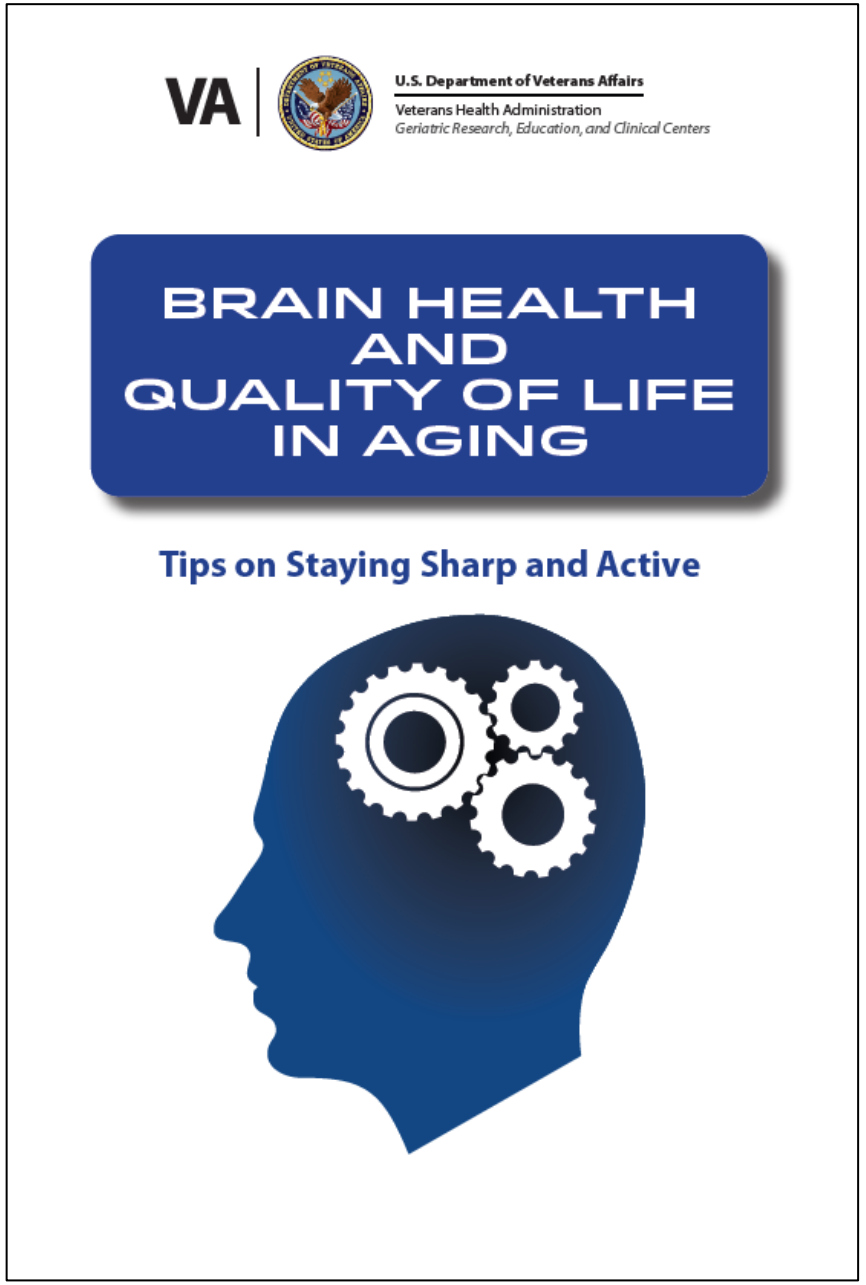
Patient Education Booklets, 1-sheeters, and Worksheet

- ***Brain Health and Quality of Life in Aging***



Brain Health & Quality of Life

- Sleep
- Mental Health
- PTSD
- Loneliness
- Physical Activity
- Side Effects
- Vision and Hearing
- Medical Problems
- Tips
- Contact Julie.Moorer@va.gov for print materials
- www.va.gov/geriatrics/brain



Product of the GRECC national Aging and Cognitive Education (ACE) workgroup.

DID YOU KNOW?

- Physical and emotional health are linked with brain health in many ways.
- *Brain Health* means that your brain keeps working well as you get older.
- This booklet lists some of the reasons for problems with memory and thinking, and what you can do about them.
- Almost all products sold to protect your brain, memory, or thinking are not supported by science.
- Talk to your provider if you are worried about changes in your memory, or thinking.

SLEEP

Sleep recharges your brain.

Your brain needs quality sleep at night to work well during the day.

If you sleep poorly, it may affect your thinking.

- Sleep disorders are more common with aging.
- Many people have unhealthy sleep habits.

What you can do:

Work on healthy sleep habits:

- Keep a bedtime routine
- Do not read or watch TV in bed
- Avoid caffeine and alcohol around bedtime
- Avoid using electronics before bedtime
- Allow your mind time to relax

Sleep apnea is a common reason for poor sleep. The signs of sleep apnea are loud snoring, gasping for breath during sleep, and daytime tiredness. If you notice these, tell your health care provider. You may need a sleep study. There is an effective and safe treatment for the problem.

MENTAL HEALTH

Stress, depression, and anxiety interfere with thinking clearly.

Stressful life situations, worry, or low mood can make it harder to focus on what is happening around you.

People with depression often feel that their thoughts are slowed down or confused.

Worrying or being anxious is distracting and can make it hard to concentrate.

What you can do:

If you are feeling unusually sad, anxious, uninterested, or are "stressed out", talk to your health care provider about it.

Mental Health help is available to you. Discuss mental health issues with any of your VA providers.

If you are having thoughts of hurting yourself, get help right away. You can dial 9-1-1 or go to an emergency room.

Call the Veterans Crisis Line: DIAL 988 then PRESS 1

POST TRAUMATIC STRESS DISORDER (PTSD)

PTSD can interfere with clarity of thinking.

PTSD can stop you from being present in the "here and now" and bad memories can intrude in your daily life.

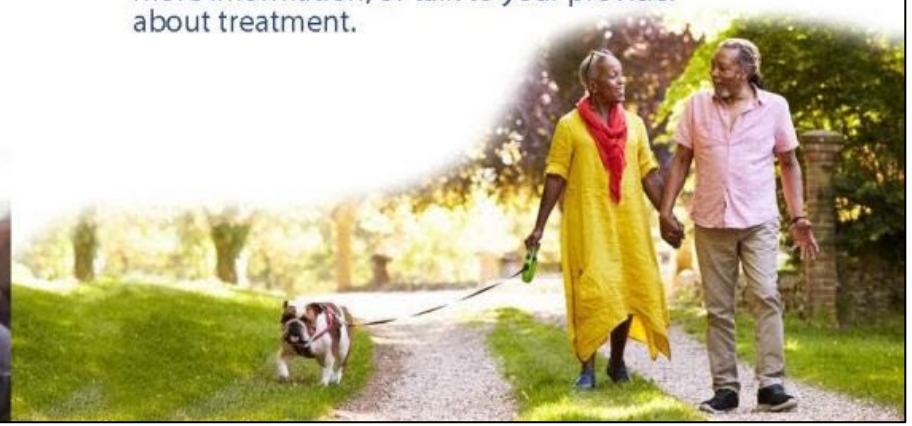
People with PTSD may "zone out," misplace things, feel lost, or forget what people tell them.

PTSD-related problems with attention and focus often come and go, and may be worse during stress, or when you're in certain situations.

What you can do:

- Be kind to yourself!
- You can learn skills to improve your ability to remember. For example, use memory aids and mindfulness to help you stay in the present vs. the past.
- Get treatment for PTSD.

Visit http://www.ptsd.va.gov/ for resources and more information, or talk to your provider about treatment.



LONELINESS

Relationships and social connection help keep your brain sharp!

Loneliness is a feeling of not belonging, or of being disconnected.

You can feel lonely even if you are living with other people, and even if you are not depressed.

Loneliness can develop for various reasons at different times of life.

What you can do:

- Find out about activities in your area. Talk to your healthcare provider or a social worker about programs.
- **Group activities** can improve emotional health and functioning.
- **Get involved** with hobbies that you used to enjoy and join groups who share your interests (e.g., book clubs, social groups, or volunteering).
- **Make contact** with others. Don't wait for them to call you.

PHYSICAL ACTIVITY

An active mind is helped by an active body.

People who engage in regular physical activity show better thinking and memory than those who are inactive.

Regular physical activity and exercise improve how your body and your brain work.

What you can do:

Remember that even small increases in activity can have **big benefits.**

There is an activity for everyone!

- **Walk more** if you spend a lot of time sitting.
- Consider **chair exercise** if you can't walk.
- Talk to your provider in order to identify **safe physical activities** for you.
- Some VA clinics offer **classes**, such as MOVE!™, Tai Chi, or Yoga.
- **Set daily goals.**
- Find an **exercise buddy** or **join a group** to help keep you motivated.

For resources and information on becoming more active visit: https://www.move.va.gov or https://www.nia.nih.gov/health/exercise-physical-activity

SIDE EFFECTS

Some medications, alone or in combination, can cause confusion.

As people get older, they may become more sensitive to medication side effects.

Some types of medication commonly cause confusion.

Examples are:

- Medications to treat bladder problems
- Medications for sleep
- Narcotic pain medications
- Cold and flu medications

Taking a lot of pills increases the risk of side effects.

Drinking alcohol makes side effects more likely.

What you can do:

Discuss your medications with your pharmacist or health care provider, especially if you have concerns about side effects.

Also, discuss any supplements or over the counter medications you take or are considering.

VISION AND HEARING

Our eyes, ears, and brain work as a team.

Seeing and hearing well helps the brain understand and remember new information.

As we get older:

- We need more **light** and more **contrast** to see well, even with glasses.
- We have trouble with **glare, depth perception**, and distinguishing **colors**.
- It is harder to **hear and understand** what people say.
- Listening takes extra concentration in noisy places, or if people speak quickly.

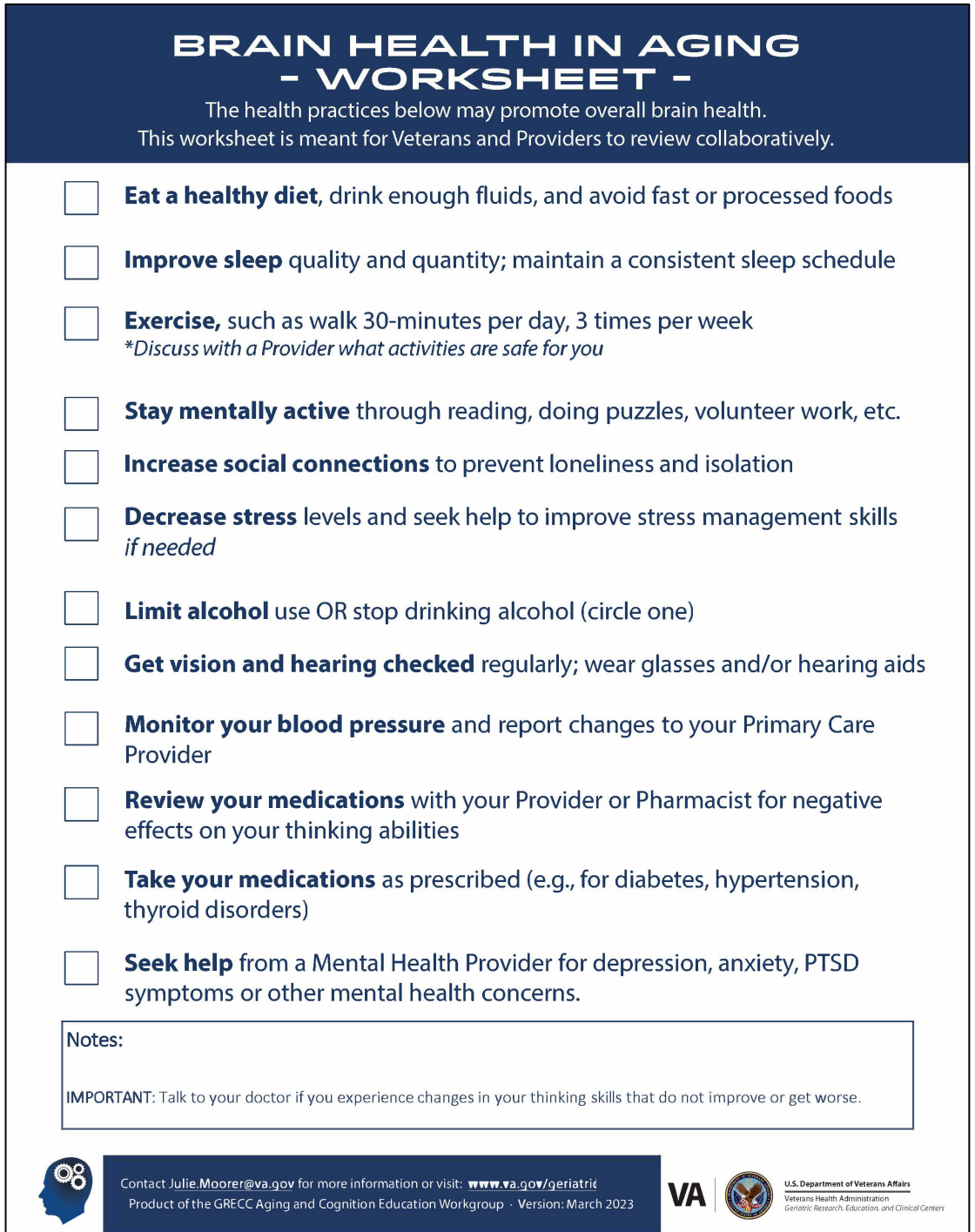
What you can do:

- Make sure your vision and hearing are at their best! Get regular check-ups!
- Use prescribed glasses and vision aids.
- Adjust light to fit your needs and tasks.
- See an audiologist. You may benefit from hearing aids or listening devices.
- Ask people to face you, and speak more slowly and clearly.
- Confirm you have heard and understood correctly.

New tool!

Brain Health Worksheet

https://www.va.gov/grecc/docs/GRECCBrainHealthWorksheet.pdf



BRAIN HEALTH IN AGING
- WORKSHEET -

The health practices below may promote overall brain health.
This worksheet is meant for Veterans and Providers to review collaboratively.

- ☐ **Eat a healthy diet**, drink enough fluids, and avoid fast or processed foods
- ☐ **Improve sleep** quality and quantity; maintain a consistent sleep schedule
- ☐ **Exercise,** such as walk 30-minutes per day, 3 times per week
  **Discuss with a Provider what activities are safe for you*
- ☐ **Stay mentally active** through reading, doing puzzles, volunteer work, etc.
- ☐ **Increase social connections** to prevent loneliness and isolation
- ☐ **Decrease stress** levels and seek help to improve stress management skills *if needed*
- ☐ **Limit alcohol** use OR stop drinking alcohol (circle one)
- ☐ **Get vision and hearing checked** regularly; wear glasses and/or hearing aids
- ☐ **Monitor your blood pressure** and report changes to your Primary Care Provider
- ☐ **Review your medications** with your Provider or Pharmacist for negative effects on your thinking abilities
- ☐ **Take your medications** as prescribed (e.g., for diabetes, hypertension, thyroid disorders)
- ☐ **Seek help** from a Mental Health Provider for depression, anxiety, PTSD symptoms or other mental health concerns.

Notes:

IMPORTANT: Talk to your doctor if you experience changes in your thinking skills that do not improve or get worse.

Contact Julie.Moorer@va.gov for more information or visit: www.va.gov/geriatric
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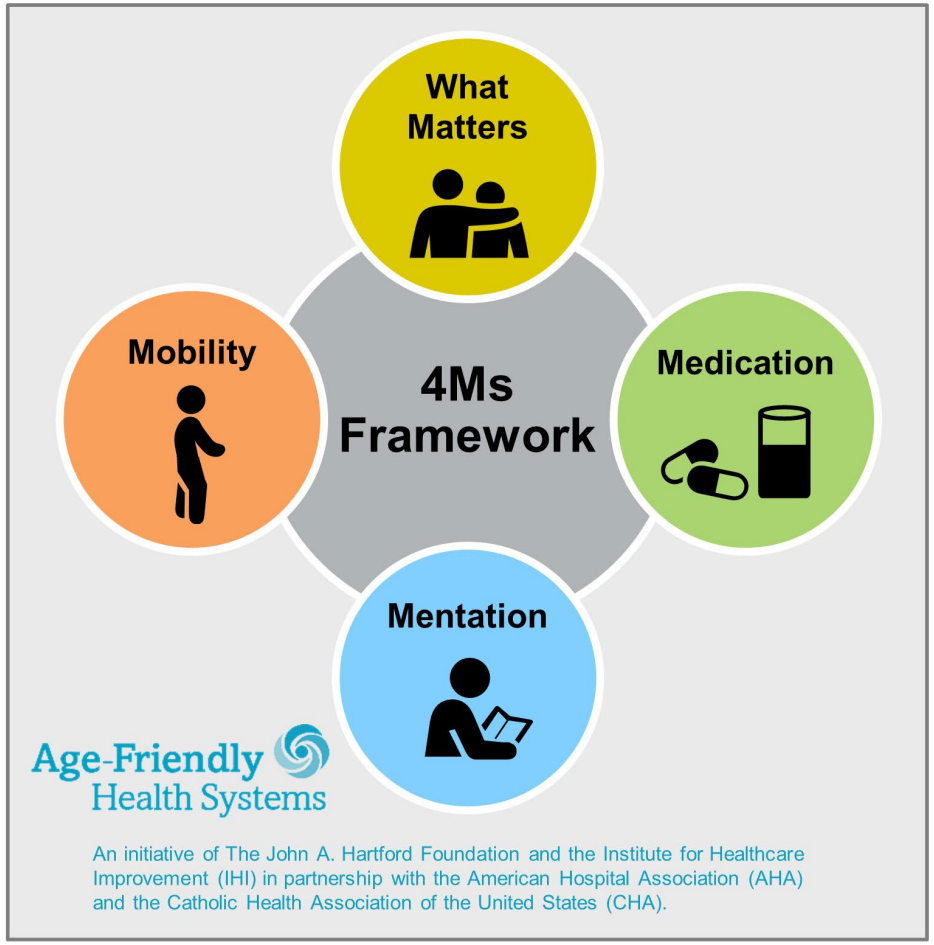
Geriatric Research, Education, and Clinical Centers

Brain health education requires more than mentation, mobility and medications…



For related work, this graphic may be used in its entirety without requesting permission.
Graphic files and guidance at ihi.org/AgeFriendly

What Matters

Know and align care with each older adult's specific health outcome goals and care preferences including, but not limited to, end-of-life care, and across settings of care.

Medication

If medication is necessary, use Age-Friendly medication that does not interfere with What Matters to the older adult, Mobility, or Mentation across settings of care.

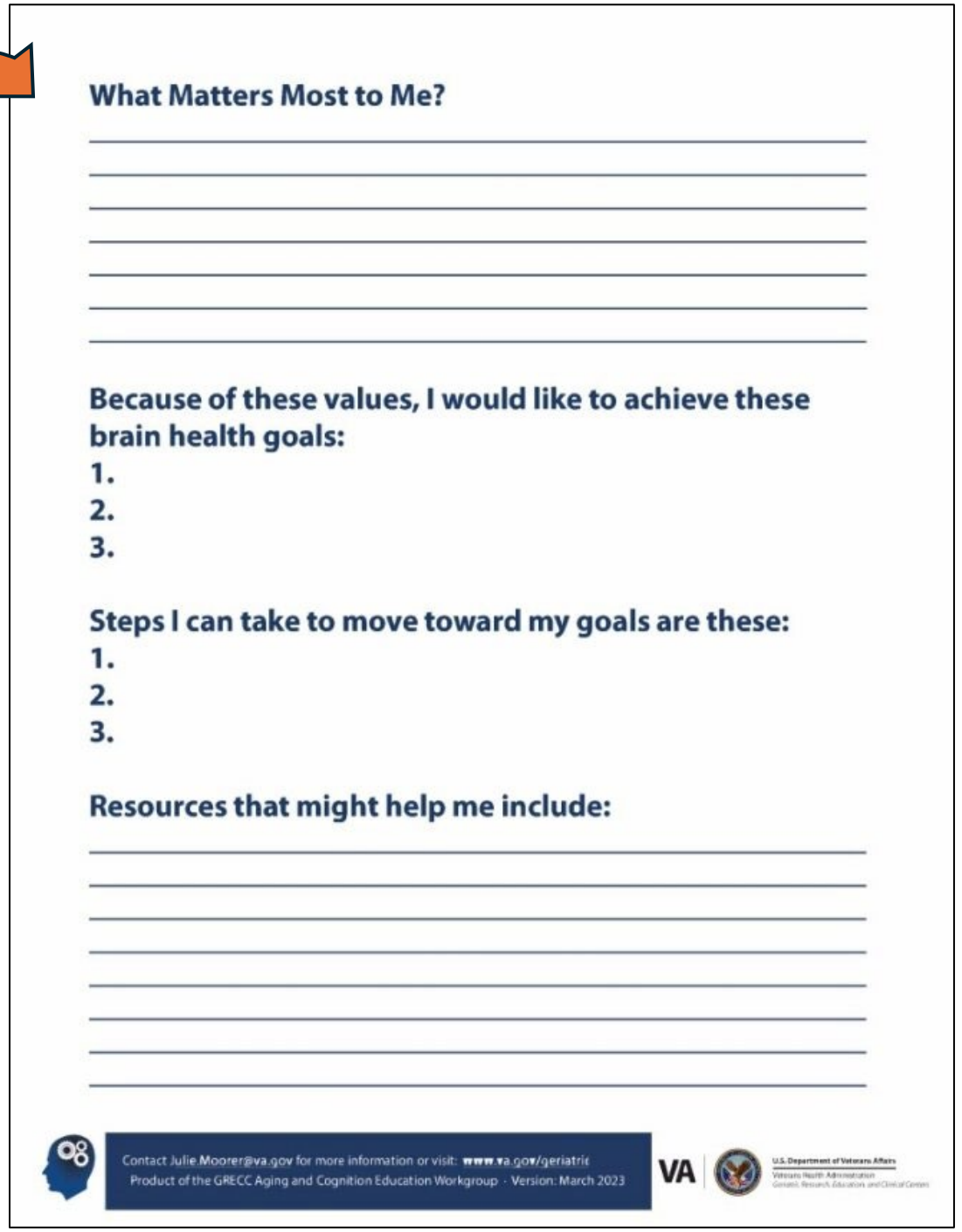
Mentation

Prevent, identify, treat, and manage dementia, depression, and delirium across settings of care.

Mobility

Ensure that older adults move safely every day in order to maintain function and do What Matters.

Connecting Brain Health to What Matters



What Matters Most to Me?

Because of these values, I would like to achieve these brain health goals:

1.
2.
3.

Steps I can take to move toward my goals are these:

1.
2.
3.

Resources that might help me include:

Contact Julie.Moorer@va.gov for more information or visit: www.va.gov/geriatric
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Veterans Health Administration
Geriatric Research, Education, and Clinical Centers

Completing Brain Health in

1. Treat this as a **collaborative conversat** patient
2. Begin with **what matters** (back side)
3. Talk with patient to elicit how **what mat** to **brain health**
4. **Review the checklist of actions** with p
5. Invite the patient to share what actions interest to them
6. **Acknowledge the efforts** that patient a
7. Write **goals** (back side)
8. Make the goals as **specific** as possible

What Matters Most to Me?

Being healthy
Daughter
Getting to know grandchildren

Because of these values, I would like to achieve these brain health goals:

1. Be clear-headed
2. Live as long as I can
3.

Steps I can take to move toward my goals are these:

1. Go to Live Oaks Senior Center 1x week
2. Walk 15 min/day
3.

Resources that might help me include:

Call senior center XXX-XXX-XXXX
Walk with daughter and grandchildren to park on weekends

Contact Julie.Moorer@va.gov for more information or visit: www.va.gov/geriatric
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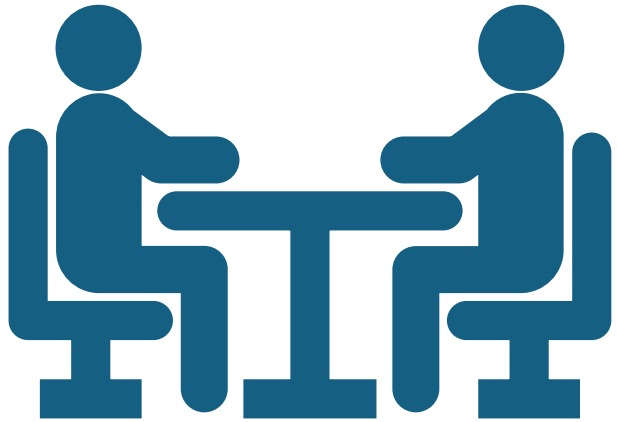
VA U.S. Department of Veterans Affairs

Tips for Conversations about Healthy Brain Behaviors

- Collaborate with the patient to identify concrete steps to improve their health practices/behaviors.
- Use Motivational Interviewing skills to help guide the conversation
    - **Open ended questions**: not easily answered with a yes/no, invite elaboration on their values and reasons for change
    - **Affirmations**: recognizing their strengths can help establish rapport and build confidence that change is possible
    - **Reflections**: ways to indicate understanding, used to highlight negative change talk or emphasize the positive
    - **Summaries**: recap what has been discussed so far communicating interest and understanding



Summary Points

- No such thing as “Dementia Prevention”
- Promotion of Healthy Brain Aging is our top goal
- Keep up to date on how to promote brain health
- Help our patients seek out reliable information and make positive behavioral changes

THANK YOU!

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Please contact Julie.moorer@va.gov if interested in education materials