

Integrating Brain Health Discussions Into Your Daily Routine

Prevention, Screening, Diagnosis, Treatment

If Cognitive Concern: Screen, Diagnose, Treat, Refer



- 1. Inquire about the patient and/or informant's cognitive concerns.** Use the FAQ: Functional Activities Questionnaire below to start a conversation.¹ Share and discuss the FAQ score to explore any challenges with instrumental activities of daily living. These may indicate mild cognitive impairment (MCI), an early stage of Alzheimer's disease (AD) that frequently (but not always) precedes AD dementia.

Functional Activities Questionnaire¹

Administration

Rate the patient's ability using the following scoring system:

- Dependent = 3
- Requires assistance = 2
- Has difficulty but does by self = 1
- Normal = 0
- Never did [the activity] but could do now = 0
- Never did and would have difficulty now = 1

ACTIVITY

SCORE

Writing checks, paying bills, balancing checkbook	
Assembling tax records, business affairs, or papers	
Shopping alone for clothes, household necessities, or groceries	
Playing a game of skill, working on a hobby	
Heating water, making a cup of coffee, turning off the stove after use	
Preparing a balanced meal	
Keeping track of current events	
Paying attention to, understanding, and discussing TV, books, or magazines	
Remembering appointments, family occasions, holidays, medications	
Traveling out of the neighborhood, driving, arranging to take buses	

TOTAL SCORE:

Evaluation

Score total may range from 0 to 30. A score of ≥ 9 (or rating of dependent on ≥ 3 activities) is likely to indicate impaired function and possible cognitive impairment.

- 2. Perform rapid screening** for MCI with Mini-Cog.² Follow up with Montreal Cognitive Assessment (MoCA)³ or St. Louis University Mental Status (SLUMS).⁴

- 3. If test scores indicate cognitive impairment**, educate the patient/informant that scores are not definitive diagnoses, and that full workup is needed. Educate the patient/informant about the utility of tiers 1 and 2 diagnostic testing itemized in the Alzheimer's Association Clinical Practice Guidelines (DETeCD-ADRD).⁵

Tier 1: Basic Testing (For Almost All Patients)

- Blood Tests: thyroid-stimulating hormone (TSH), vitamin B12, homocysteine, complete blood count (CBC) with differential, metabolic panel, erythrocyte sedimentation rate (ESR), C-reactive protein (CRP)
- Imaging: Brain magnetic resonance imaging (MRI) without contrast, or computed tomography (CT) if MRI unavailable
- Purpose: Screen for common conditions affecting cognition in older adults

Tier 2: Targeted Testing (Based on Clinical Features)

- Tests: Additional blood work (eg, antinuclear antibody [ANA], A1C, lipids), chest x-ray, urinalysis, sleep study
- Purpose: Evaluate specific concerns based on the patient's clinical profile

- 4. Educate patient/informant** on the rationale for accurate diagnosis of MCI or dementia due to AD:
 - Rule out reversible causes
 - Patient/caregiver/family advocacy/support: referral to Alzheimer's Association
 - Safety (driving, firearms, elopement, financial elder exploitation)
 - Legal, financial, and living situation planning
 - Narrow window for potential treatment with anti- β -amyloid antibody during stages of MCI through mild dementia due to AD
 - Earliest referral to cognitive neurology/memory center with capacity for anti- β -amyloid antibody infusion (long waiting times)
- 5. If the diagnosis is dementia** due to AD at any stage (mild through severe), educate the patient and care partner about FDA-approved therapies available to potentially slow decline (cholinesterase inhibitors [donepezil, rivastigmine, galantamine] or memantine). This should be done even if anti- β -amyloid antibody treatment is pursued.⁶

If No Cognitive Concern or Symptoms: Conversation on Preserving Brain Health



Modifiable Risk Factors for AD and Related Dementias⁷⁻⁹

Risk Factor	Details
Diabetes: Fasting glucose <100 mg/dL	Type 2 diabetes and prediabetes increase the risk of conversion from amnesic MCI to AD and nonamnesic MCI to all-cause dementia. ¹⁰ Metabolic syndrome and prediabetes increase the risk of conversion from any type of MCI to all-cause dementia. ¹¹
Obesity: BMI <30 kg/m ²	Diabetes and physical inactivity in midlife are associated with increased dementia risk. Obesity in late life is associated with increased dementia risk. ¹²
Nutrition	Adherence to Mediterranean-DASH (Dietary Approaches to Stop Hypertension) Intervention for Neurodegenerative Delay (MIND) diet decreases cognitive decline and Alzheimer's pathology on autopsy; higher green leafy vegetable intake is associated with less Alzheimer's pathology. ^{13,14}
Tobacco Cessation	Current smoking increases dementia risk, while smoking recency is more related to dementia than lifetime exposure. Smoking cessation at any age might reduce these risks for cognitively healthy individuals. ¹⁵
Hypertension: <120/<80 mm Hg	Hypertension is a significant risk factor for the development of neurodegenerative dementias. Trials have been favorable overall in improving cognition by blood pressure reductions with antihypertensives. ¹⁶
Hearing Loss	Dementia risk is higher among people with hearing loss not using hearing aids compared with those without hearing loss or with hearing loss using hearing aids. ¹⁷ This suggests that hearing aids might prevent or delay the onset and progression of dementia.
High Cholesterol: <200 mg/dL	100 primary studies and 5 meta-analyses have found cholesterol level to significantly increase total AD risk. Subgroup analysis shows that the development of AD is most influenced by low-density lipoprotein (LDL) level. ¹⁸
Depression	Depression is associated with a 51% higher risk of dementia, with increased risk as the number of depressive episodes increases. Treatment of depression decreases the risk of dementia. Impairment in short-term delayed memory recall during late-life depression may increase the risk of dementia despite treatment. ¹⁹
Traumatic Brain Injury (TBI)	TBI is widely regarded as a risk factor for all-cause dementia, particularly when sustained at older ages. ²⁰
Sleep disorders	Sleep disturbances increase risk of all-cause dementia, AD, and vascular dementia. ²¹ Optimal sleep duration is 7-8 hours/night with good sleep hygiene. Evaluate for sleep apnea if snoring. ²²
Cognitive Intervention	Cognitive stimulation improves memory, orientation, language, praxis, and calculation in older adults, even those with MCI or dementia. A 45-minute session, either personal/adapted or structured, is effective. ²³
Physical Activity	Among older adults, more time spent in sedentary behaviors is significantly associated with all-cause dementia. ²⁴
Excessive Alcohol Use	Alcohol use disorder (hazardous drinking, binge drinking, or alcohol dependence) is associated with an increased risk of cognitive impairment, AD, and dementia, especially vascular dementia. ²⁵
Social Isolation	Social isolation is a risk factor for structural and molecular pathologies of the brain, supporting associations of social isolation with cognition and dementia. This may be an early indicator of increased dementia risk. ²⁶
Visual Loss	Vision impairment is associated with an increased risk of both dementia and cognitive impairment in older adults. ²⁷
Air Pollution	Greater exposure to particulate matter, nitrogen dioxide, nitrous oxides, carbon monoxide, and ozone is associated with increased risk of dementia. Evidence linking air pollutant exposure to cognitive decline is more equivocal. ²⁸

Brain Health Resources for Patients/Care Partners

Alzheimer's Association: [alz.org](https://www.alz.org)

- **Brain Health:** [alz.org/help-support/brain_health](https://www.alz.org/help-support/brain_health)
- **Caregiver Support:** [alz.org/help-support/caregiving](https://www.alz.org/help-support/caregiving)
- **Alzheimer's Association's Annual Report:** [alz.org/alzheimers-dementia/facts-figures](https://www.alz.org/alzheimers-dementia/facts-figures)

Smart Patients: [smartpatients.com](https://www.smartpatients.com)

- **Interactive Brain Health Community:** Online patient support community for peer-to-peer learning and shared experiences [smartpatients.com/communities/cco-brain-health](https://www.smartpatients.com/communities/cco-brain-health)

American Heart Association: [heart.org](https://www.heart.org)

- **Risk Factors for Dementia:** [heart.org/en/news/2022/03/04/these-three-risk-factors-may-have-the-biggest-impact-on-dementia-cases](https://www.heart.org/en/news/2022/03/04/these-three-risk-factors-may-have-the-biggest-impact-on-dementia-cases)
- **Vascular Dementia:** [stroke.org/en/about-stroke/effects-of-stroke/cognitive-effects/vascular-dementia](https://www.stroke.org/en/about-stroke/effects-of-stroke/cognitive-effects/vascular-dementia)
- **Blood pressure:** [heart.org/en/news/2018/11/01/whats-the-blood-pressure-connection-to-alzheimers-disease](https://www.heart.org/en/news/2018/11/01/whats-the-blood-pressure-connection-to-alzheimers-disease)
- **Diabetes:** [heart.org/en/news/2021/07/21/diabetes-and-dementia-risk-another-good-reason-to-keep-blood-sugar-in-check](https://www.heart.org/en/news/2021/07/21/diabetes-and-dementia-risk-another-good-reason-to-keep-blood-sugar-in-check)
- **Exercise:** [heart.org/en/healthy-living/fitness/getting-active/getting-started--tips-for-long-term-exercise-success](https://www.heart.org/en/healthy-living/fitness/getting-active/getting-started--tips-for-long-term-exercise-success)

American Association for Geriatric Psychiatry: [aagponline.org](https://www.aagponline.org)

- **Depression and Caregiver Stress:** [aagponline.org/families-caregivers/patient-education/](https://www.aagponline.org/families-caregivers/patient-education/)

National Sleep Foundation: [thensf.org/](https://www.thensf.org/)

Mediterranean-DASH Diet Intervention for Neurodegenerative Delay (MIND Diet): theofficialmindingdiet.com/

TBI Prevention: [cdc.gov/traumatic-brain-injury/prevention/index.html](https://www.cdc.gov/traumatic-brain-injury/prevention/index.html)

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