

Managing cognitive impairment

Evidence-based recommendations for prevention,
diagnosis, and management



Preventing cognitive decline

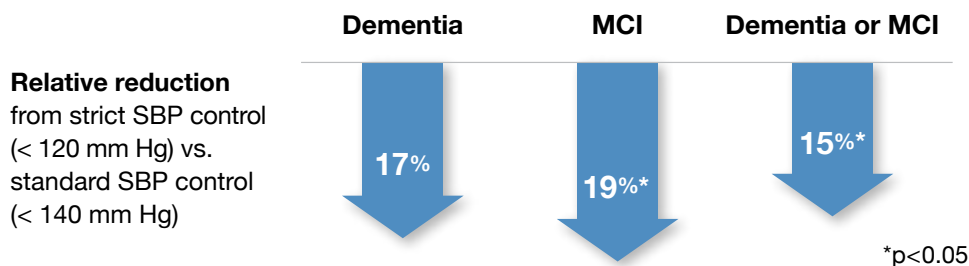
Some primary care interventions may reduce dementia risk.



Control blood pressure:

Strict blood pressure control can lead to a reduction in mild cognitive impairment (MCI)

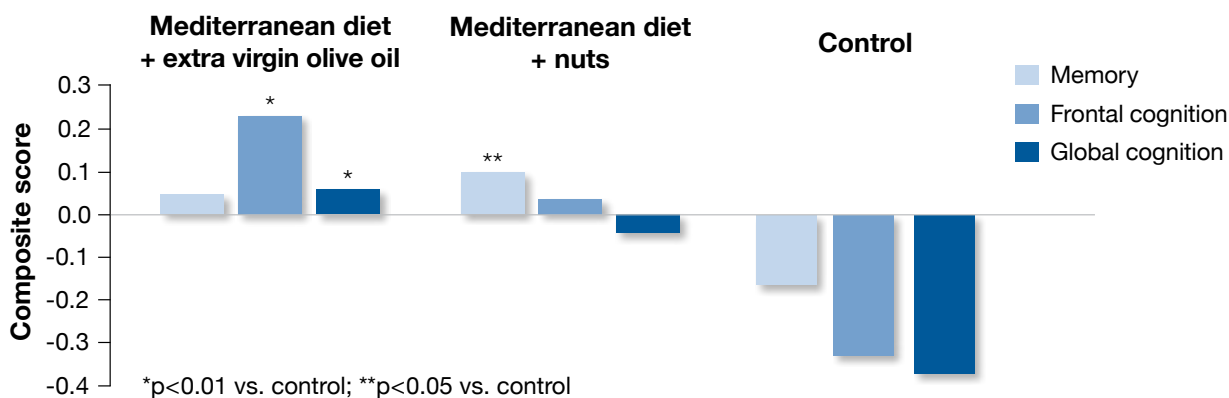
FIGURE 1. After five years of follow-up, the SPRINT-MIND randomized trial found tighter systolic blood pressure (SBP) control reduced the incidence of MCI.¹



Recommend a Mediterranean diet:

A Mediterranean-style diet may slow cognitive decline

FIGURE 2. A four-year study of older patients without mild dementia randomized to a Mediterranean diet plus olive oil or nuts found improved cognitive performance vs. controls.² However, a similar 2023 trial did not find this effect.³



Other options are controversial and mostly unproven to prevent or treat cognitive impairment, including:

- Common vitamins and dietary supplements (except for patients with proven deficiency)
- Over-the-counter “memory enhancers” (e.g., Prevagen)
- Exercise
- Memory games, crossword puzzles

Evaluating the patient: Is it dementia?

The USPSTF* does not recommend universal screening for cognitive impairment, reserving it for patients with signs or symptoms.⁴ Use validated instruments in the evaluation.

Diagnosing cognitive impairment

Overall assessment:

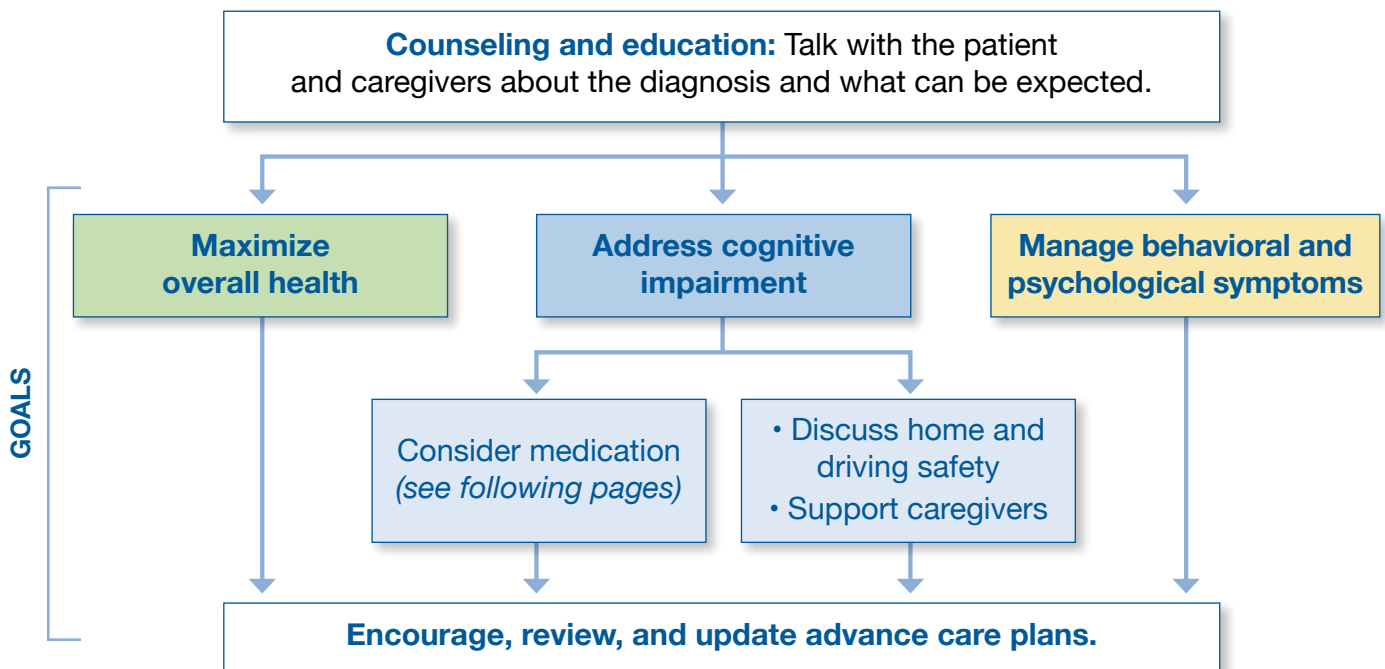
- Capture relevant history:**
 - duration, progression, other conditions, social history, medications (OTC and prescribed), non-prescribed substances
- Perform a targeted physical exam,** looking for focal neurological signs and other illnesses.
- Define cognitive status** with a validated tool (e.g., Mini-cog).
- Refer for neuropsychological testing** if further assessment is needed.

Search for reversible causes:

- Evaluate for treatable conditions, including:**
 - hearing impairment
 - depression
 - infection
 - metabolic abnormality
 - medication side effects
- Order laboratory tests** (e.g., CBC, basic chemistries, vitamin B₁₂, TSH)
- Obtain brain imaging,** if indicated.

Comprehensive management of cognitive impairment

FIGURE 3. Managing the patient with cognitive impairment when no reversible cause is found



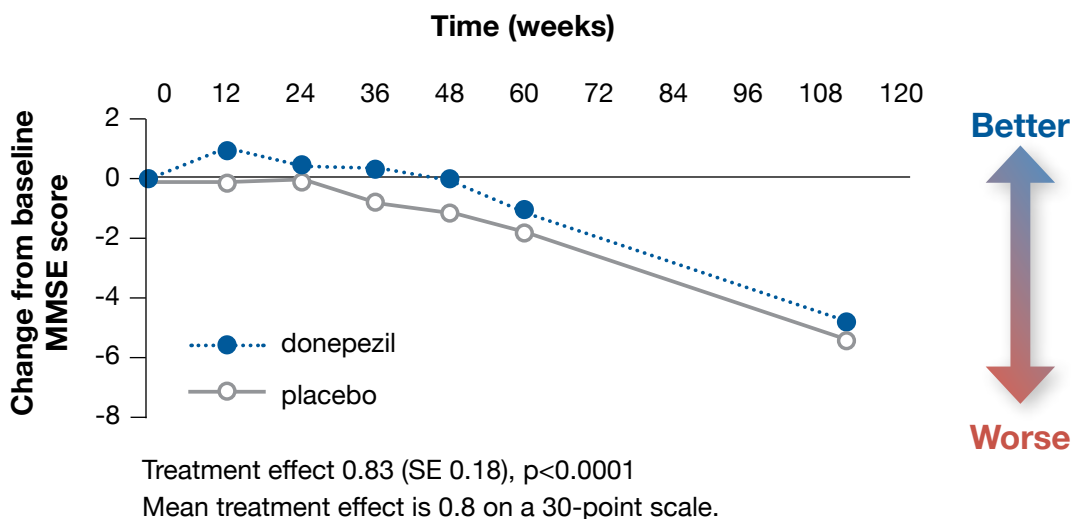
*The U.S. Preventive Services Task Force

Older medications for cognitive impairment

The benefits of cholinesterase inhibitors and memantine are generally minimal and time-limited. Side effects are common.

Cholinesterase inhibitors are approved for mild to severe Alzheimer's disease, while memantine is approved for moderate to severe disease. Neither is indicated for MCI.

FIGURE 4. If a response occurs, it will usually happen within three months of starting treatment and manifest as a slowing of decline, rather than improvement. Any effects generally dissipate after 6-12 months in most patients.⁵



If trying a cholinesterase inhibitor or memantine:

1 Start at a low dose and titrate based on patient tolerance.

No cholinesterase inhibitor is better than any other; similarly, there is no clear difference between cholinesterase inhibitors and memantine.⁶ Combining donepezil with memantine provides no added benefit over either medication alone.⁷

2 Monitor carefully for these common side effects:

Cholinesterase inhibitors

- nausea, vomiting, diarrhea
- anorexia
- dizziness
- bradycardia

Memantine

- dizziness
- confusion
- headache
- hypertension

3 Reassess at 3-6 months of treatment.

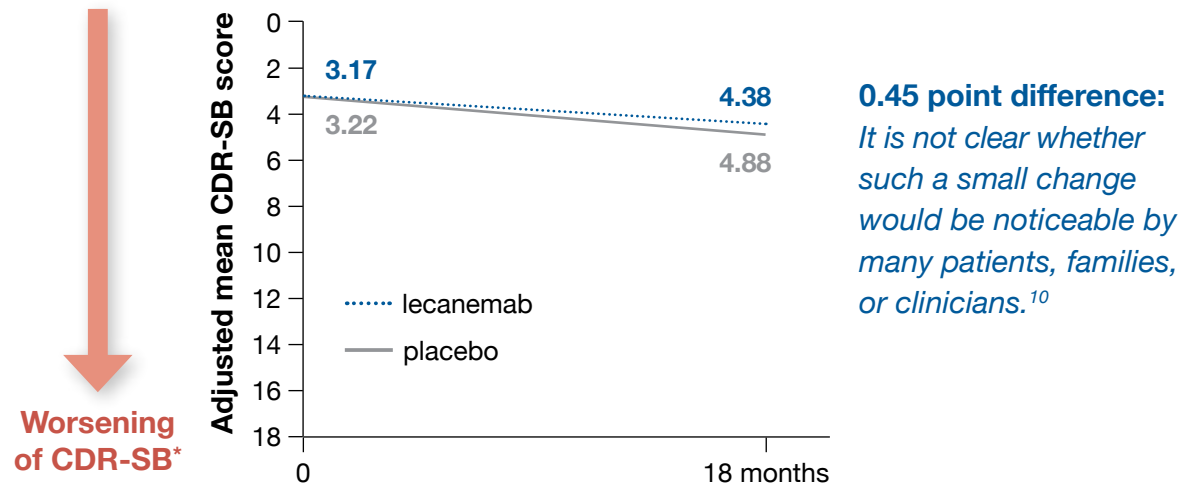
Determine if the risk/benefit relationship warrants continuing. Taper if discontinuing.

New anti-amyloid monoclonal antibodies

The idea of reducing amyloid deposits in the brain to improve cognition spurred the development of several monoclonal antibodies;⁸ most have failed to show major clinical benefit.

Lecanemab (Leqembi)

FIGURE 5. In older patients with MCI or mild Alzheimer's disease, on an 18-point scale, patients taking lecanemab scored 0.45 points better than those randomized to placebo.⁹



*Clinical dementia rating—sum of boxes scale

Lecanemab has barriers for administration and follow-up:

- Patients should be screened to document elevated levels of brain amyloid, **by PET scan or analysis of cerebrospinal fluid** following lumbar puncture.^{11,12}
- Lecanemab must be given by **intravenous infusion every 2 weeks, indefinitely.**
- **MRI scans are required throughout treatment** to monitor for side effects.

It incurs the risk of important side effects:

- **Infusion related reactions occur in about 1 in 4 patients** and include flushing, chills, fever, rash, or body aches. Pre-medication may help prevent these reactions.
- **Cerebral edema, effusion, and/or hemorrhage** occurred in 27% of patients given lecanemab vs. 9% given placebo.
- A small number of patients taking lecanemab and anticoagulants or receiving tissue plasminogen activator have had **major cerebral bleeds resulting in stroke and death.**¹³ The magnitude of bleeding risk is unknown.

Additional material on lecanemab for prescribers, patients, and families available at: [AlosaHealth.org/Dementia](https://www.alosahealth.org/dementia)

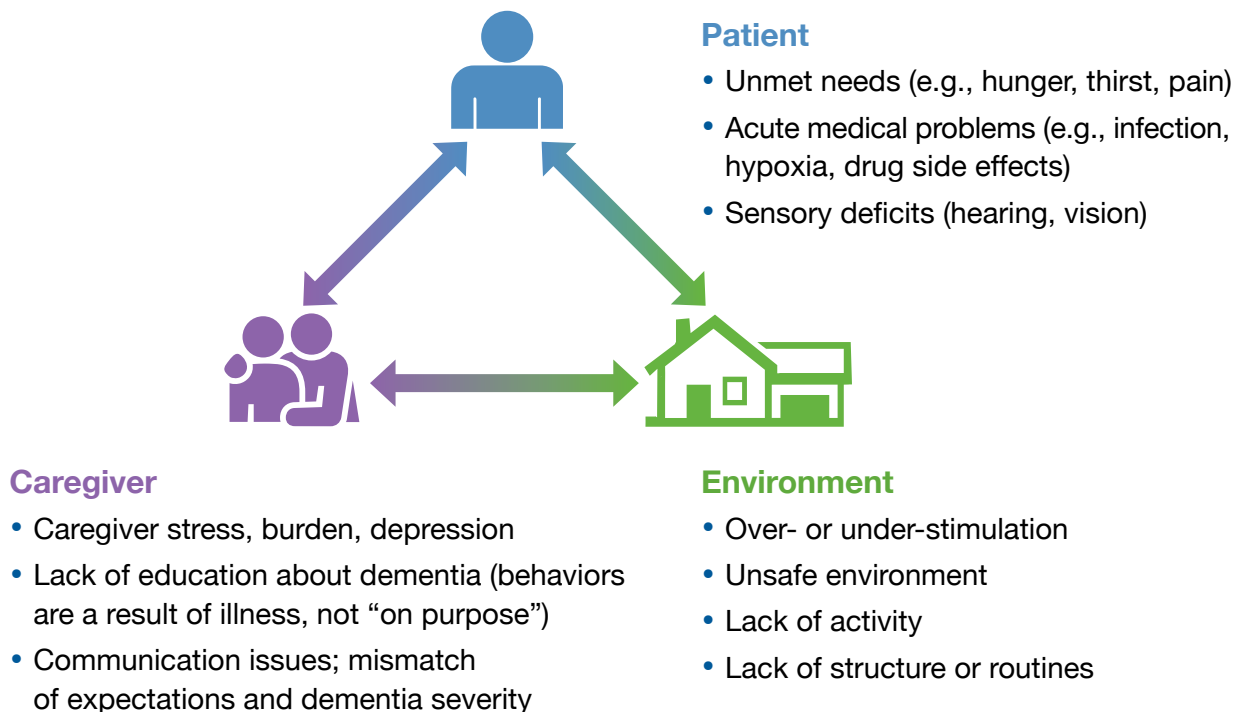
Addressing the behavioral and psychological symptoms of dementia (BPSD)

Patients with cognitive impairment often experience apathy, depression, anxiety, agitation, and hallucinations or delusions. Although medications are sometimes necessary, they can also make things worse.

TABLE 1. The Describe, Investigate, Create, and Evaluate (DICE) approach helps manage behavioral problems.¹⁴

D escribe	<ul style="list-style-type: none"> • Characterize the behavior through discussions with the patient, caregivers, or proxies.
I nvestigate	<ul style="list-style-type: none"> • Identify any immediate concerns about safety. • Look for possible underlying causes (see Figure 6).
C reate	<ul style="list-style-type: none"> • Collaborate with caregivers and the treatment team to create and implement a treatment plan.
E valuate	<ul style="list-style-type: none"> • Assess whether the interventions have been effective in addressing the target behavior(s). • If medications are used, evaluate periodically for adverse events, effects on targeted symptoms, and need for continued use.

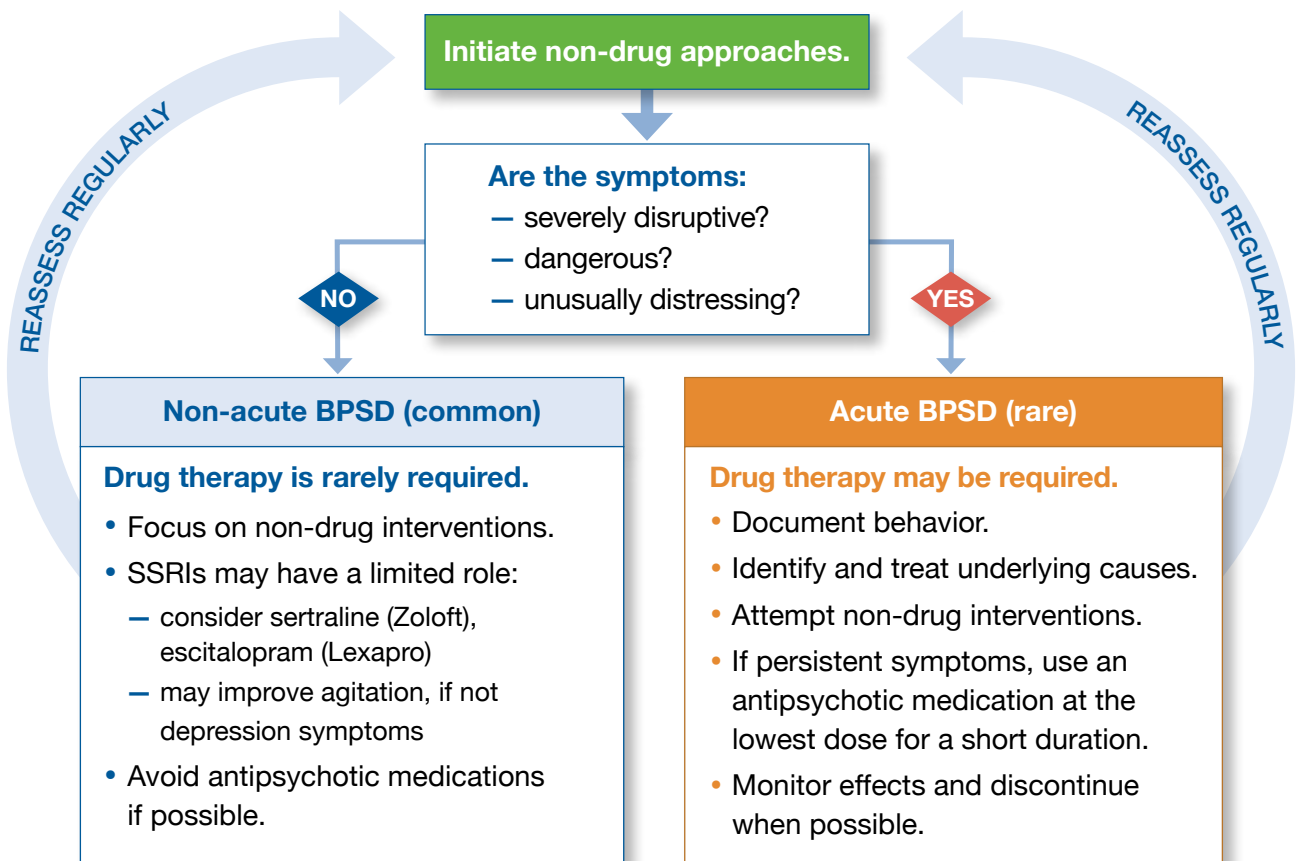
FIGURE 6. Opportunities for applying non-pharmacologic interventions:¹⁴



Whenever possible, avoid routine use of risky medications to manage BPSD

The severity of the behavior should guide the management strategy.

FIGURE 7. Managing behavioral problems in older patients with cognitive impairment^{15,16}



Antipsychotic medications increase the risk of death in older patients with dementia by about 50%.



Randomized trials show that for every 100 patients with dementia treated with an antipsychotic medication for 10-12 weeks, one will die due to a drug-related side effect.¹⁷

Prepare for progressing impairment

Advance care planning (ACP) is a continuous, dynamic process of reflection and communication among patients, those close to them, and health care professionals, to help guide clinical decision-making.

The goal is to provide care that best fits the patient’s values, goals, and preferences.¹⁸

FIGURE 8. Use tools to develop and share key health care decisions.¹⁹

STAGE OF ILLNESS	ACTION	DOCUMENTS
<p>Diagnosis</p>	<p>Have serious illness conversations throughout.</p>	<ul style="list-style-type: none"> Name a health care proxy to make treatment decisions when the patient is unable to. <p>Every patient with a serious illness needs a medical decision maker or health care proxy.</p>
<p>Progressing illness</p>		<ul style="list-style-type: none"> Provide and review Advance Directives. Complete a Physician’s Order for Life-Sustaining Treatment (POLST).
<p>End of life</p>		

Start talking with patients and surrogates about the patient's preferences

Components of a conversation for patients with dementia^{20,21}

1. Start the conversation early.

Ask the patient to talk about their wishes with the people who will be making care decisions as the disease progresses.

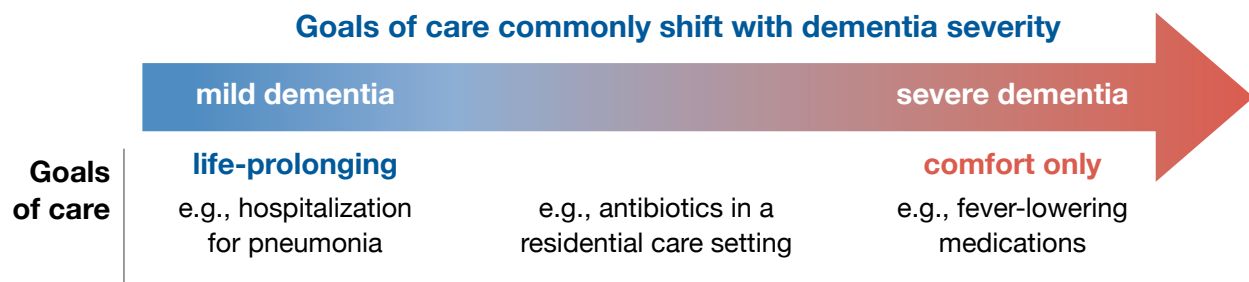
2. Discuss what to expect with the progression of dementia.

3. Ask about the patient's treatment preferences, including end-of-life care.

4. Document the advance care plan in writing.

Encourage the patient to have a living will, health care proxy, medical directives, and power of attorney.

5. Reassess patient needs and wishes when status changes (e.g., transition to a nursing facility).



Getting started can be difficult.

Prepare patients to think about what they want and talk to their family members. Many patients don't document or discuss their wishes adequately.²²

Field-tested tools can help initiate these conversations:

- **PREPARE for your care:** a computer-guided process for ACP documentation²³
- **“What Matters to Me” Workbook:** one of many tools from The Conversation Project to help patients clarify what kind of care they want
- **Five Wishes:** questions to help prepare and document patient preferences²⁴
- **The Serious Illness Conversation Guide:** a structure for having difficult conversations²⁵

Links to materials available at: AlosaHealth.org/Dementia

Caregiver support

Coping classes can reduce distress, anger, and depression and increase self-efficacy.²⁶

- **Caregiver center:** qrco.de/Alz_caregiving
- **Best programs for caregiving:** bpc.caregiver.org
- **Document a caregiver plan:** qrco.de/CDCCaregiver_plan
- **Texas AAA:** qrco.de/TX_AAA



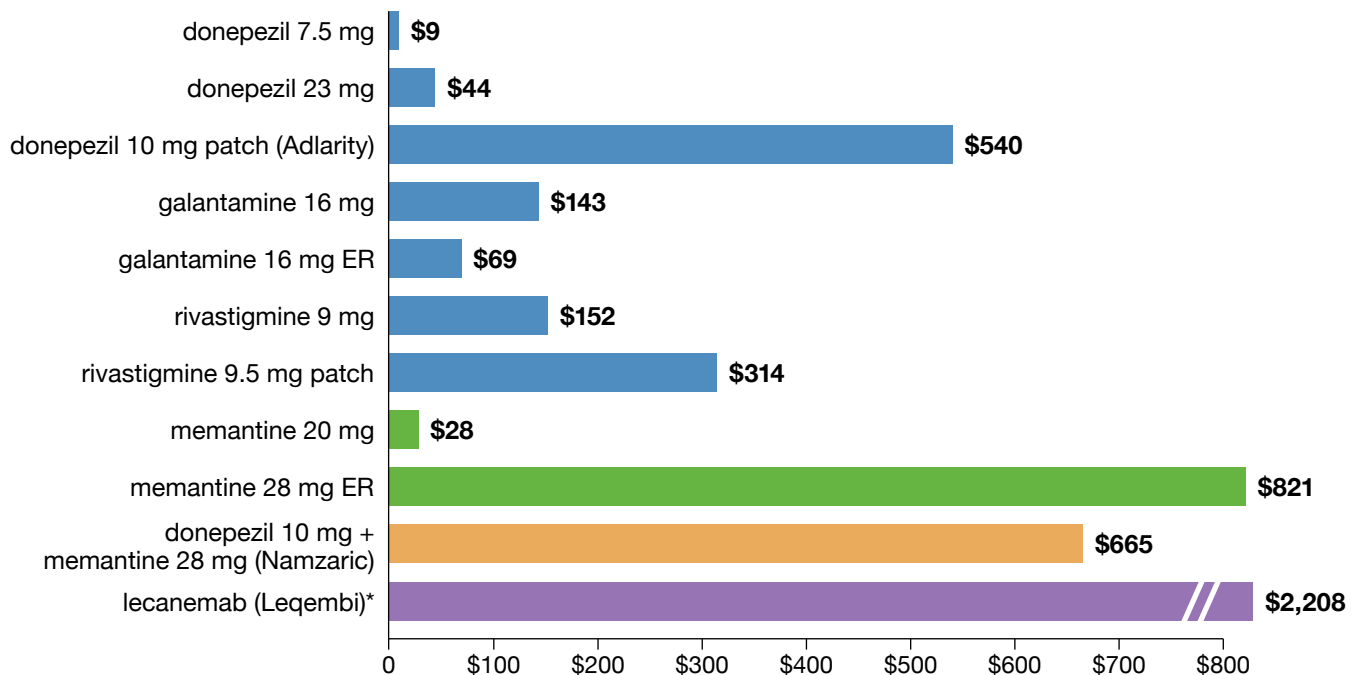
Alzheimer's Association
caregiver support

Patient education

- **Steps to maintain brain health:** qrco.de/CDC_healthy_brain
- **10 signs of Alzheimer's disease:** qrco.de/Alz_10_signs

Cost of medications

FIGURE 9. Price of a 30-day supply of medications to manage dementia



*Monthly price of lecanemab is based on annual price released on January 9, 2023 by Esai/Biogen. Infusion billed additionally through Medicare Part B. Other pharmacy prices are from goodrx.com, March 2023. Listed doses are based on Defined Daily Doses by the World Health Organization. All doses shown are generics when available, unless otherwise noted. These prices are a guide; patient costs will be subject to copays, rebates, and other incentives. These doses should not be used as a guide for treatment.

Key points

- **Control blood pressure and consider a Mediterranean diet** to reduce the risk of developing cognitive impairment.
- **Assess dementia severity** with a tool like the Mini-Cog and address reversible causes of cognitive impairment.
- Look for and address **reversible causes of cognitive deterioration**.
- **Medication options have minimal impact** on the course of disease.
 - Cholinesterase inhibitors and memantine may slow cognitive decline in some patients, but effects are modest and time-limited—while side effects are common.
 - Newer medications, such as lecanemab, have marginal benefit with important risks and substantial patient burden.
- **Identify reversible causes of behavioral and psychological symptoms** of dementia. Reserve antipsychotic medications for dangerous situations.
- **Begin advance care planning conversations early**.
- **Support caregivers** to maintain their own health, and encourage self-care.

More information is available at AlosaHealth.org/Dementia

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About this publication

These are general recommendations only; specific clinical decisions should be made by the treating clinician based on an individual patient's clinical condition. More detailed information on this topic is provided in a longer evidence document at AlosaHealth.org.



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