

## Cognitive Screening Tests

Cognitive tests are used to assess how well the brain is functioning. The tests are used to identify issues with cognition and to assess the need for further in-depth testing. Cognitive tests are quick screenings that inspect how the brain processes thoughts by answering simple questions and completing simple tests. These testing tools are available and can be used when there is a suspicion of mental decline or impairment.

The brain's ability to process information taken from our senses includes activities like thinking, learning, using language, remembering, reasoning, paying attention, decision making and applying judgment. There are available cognitive screening tests that check various brain functions and are completed by nurses or providers who are trained in brain health. Depending on results of cognitive testing further evaluation can be ordered to complete a neuropsychological assessment.

Some common cognitive screening tests:

- Montreal Cognitive Assessment (MoCA): Test involves memorizing a brief list of words, naming objects shown in pictures, copying shapes, and performing other tasks. This test takes about 15 minutes to complete. <https://mocacognition.com/>
- Mini-Mental State Exam (MMSE): Test involves counting backward, objects in the room and identifying the objects, stating the date and common, well-known facts. It assesses a range of cognitive functions, including attention, language, memory, orientation, and visuospatial proficiency. A score of 25–30 is considered normal, while scores below 10 indicate severe impairment. This test takes about 10 minutes. <https://www.ihacpa.gov.au/sites/default/files/2022-08/smmse-tool-v2.pdf>
- Mini-Cog: Test involves memorizing and recalling three-word list of unrelated words. Drawing a circle clock, adding the times, and drawing hands to show a specific time. This test is the shortest, about three minutes and easiest to complete. <https://mini-cog.com/>
- St Louis University Mental Status Examination (SLUMS)-Test is used to identify cognitive dysfunction by asking a series of questions. It is a 30-point calculated score exam. It used to assess normal, mild cognitive impairment or dementia state. High score indicates better cognitive function and low score suggest degrees of cognitive impairment. This test takes approximately seven minutes. <https://www.slu.edu/medicine/internal-medicine/geriatric-medicine/aging-successfully/assessment-tools/mental-status-exam.php>

There are other screening tests for cognition, but these are the commonly used tests. A complete evaluation is recommended, and clinicians should consider potentially treatable causes of mild cognitive impairment (MCI), such as psychiatric disease, the effects of medications, and underlying medical conditions.

While MCI is associated with the risk of Alzheimer disease (AD), other neurodegenerative dementias, and vascular dementia, other conditions can also present with MCI.

- Psychiatric disease, especially depression, may present with cognitive rather than mood complaints.

- Adverse effects of medications (e.g., anticholinergic, antihistamine use) and sleep disturbances are also common causes of cognitive complaints, particularly in older adult populations.
- Metabolic disturbances, hypothyroidism, and vitamin B12 deficiencies should be considered in the differential diagnosis of MCI.
- Normal aging can be associated with both subjective and objective cognitive changes. In general, these are not sufficiently severe to be of concern and are not accompanied by loss of functional abilities in daily life.
- Structural brain disease is an uncommon cause of MCI in the absence of focal neurologic deficits.

### **Medications used in Managing Dementia**

Most types of dementia cannot be cured but symptoms can be managed. These medications are used to temporarily improve symptoms of dementia.

Cholinesterase inhibitors medications boost levels of a chemical messenger involved in memory and judgment. They include donepezil (Aricept), rivastigmine (Exelon) and galantamine (Razadyne ER).

The primary use of these medications is to treat Alzheimer's disease. However, these medicines might be prescribed for other dementias. They are prescribed for people with vascular dementia, Parkinson's disease dementia and Lewy body dementia. Some side effects include nausea, vomiting and diarrhea and may also include slowed heart rate, fainting and sleep problems.

Memantine (Namenda) works by regulating the activity of glutamate. Glutamate is another chemical messenger involved in brain functions that affect learning and memory. Memantine may be prescribed with a cholinesterase inhibitor. A common side effect of memantine is dizziness.

The U.S. Food and Drug Administration (FDA) has approved lecanemab (Leqembi) and donanemab (Kisunla) for mild cognitive impairment or mild dementia stage of disease, the population in which treatment was initiated in clinical trials. The studies do not include safety or effectiveness data on treatment initiation at earlier or later stages of the disease. These medications prevent the clumping of amyloid plaques in the brain.

Lecanemab is administered as IV infusion every two weeks. Side effects of lecanemab include infusion-related reactions such as fever, flu-like symptoms, nausea, vomiting, dizziness, changes in heart rate and shortness of breath.

Donanemab is administered as IV infusion every four weeks. Side effects may include flu-like symptoms, nausea, vomiting, headache, and changes in blood pressure. A rare side effect of donanemab can cause a life-threatening allergic reaction and swelling.

In addition, lecanemab or donanemab may cause swelling in the brain or small bleeds in the brain. Although these effects can be rare, they can be serious enough to cause seizures and bleeding in the brain can cause death in rare instances. The FDA recommends a brain MRI before starting treatment.

Also, the FDA recommends periodic brain MRIs during treatment for monitoring symptoms of brain swelling or bleeding.

The gene known as APOE e4 appear to have a higher risk of these serious complications. The recommendation from the FDA is to assess for the gene before start of treatment.

Patients on blood thinners should be assessed before start of treatment as blood-thinners may increase the risk of bleeds in the brain with lecanemab or donanemab.

**References:**

1. <https://my.clevelandclinic.org/health/articles/22306-cognitive-test>
2. <https://www.mdcalc.com/calc/10044/montreal-cognitive-assessment-moca>
3. [https://www.physio-pedia.com/Mini-Mental\\_State\\_Examination](https://www.physio-pedia.com/Mini-Mental_State_Examination)
4. <https://mini-cog.com/>
5. <https://www.healthline.com/health/dementia/slums-test-for-dementia>
6. <https://www.uptodate.com/contents/mild-cognitive-impairment-epidemiology-pathology-and-clinical-assessment/abstract/110> and abstract/111. Accessed October 31, 2024.
7. What is dementia? Alzheimer's Association. <https://www.alz.org/alzheimers-dementia/what-is-dementia>. Accessed October 31, 2024.
8. Dementias. <https://www.ninds.nih.gov/Disorders/Patient-Caregiver-Education/Hope-Through-Research/Dementia-Hope-Through-Research>. Accessed October 31, 2024.
9. Larson EB. Evaluation of cognitive impairment and dementia. <https://www.uptodate.com/contents/search>. Accessed October 31, 2024.

**REFERRED DRUG LIST UPDATES CAN BE FOUND HERE:**

	
ACC-RBHA, DD, ALTCS and DCS CHP	Behavioral Health (Non-Title 19/21)

**\*\* Drugs that are not on the formulary will require a PA (prior authorization) request to be submitted\*\***

**Reminder** for quicker determinations of a Prior Authorization use the ePA link for Our Providers: Please click [here to initiate an electronic prior authorization \(ePA\)](#) request.

*This newsletter is brought to you by the Mercy Care Pharmacy Team. For questions, please email Fanny A Musto ([MustoF@mercycazeaz.org](mailto:MustoF@mercycazeaz.org)), Denise Volkov ([VolkovD@mercycazeaz.org](mailto:VolkovD@mercycazeaz.org)) or Trennette Gilbert ([gilbert@mercycazeaz.org](mailto:gilbert@mercycazeaz.org))*