

# Spotlight on Health

## Testing Brain Health

Brain health reflects an individual's cognition (ie, the ability to think, learn, and remember). Cognition usually peaks by the age of 20 to 30. The subsequent rate of decline is influenced by genetic predisposition, lifestyle, and health issues, such as heart disease and diabetes. By age 70, some people may begin to show symptoms of mild cognitive impairment (MCI); some with MCI may progress to dementia (major NCD).

In this month's Spotlight on Health, we discuss how to objectively test for brain health and present arguments for and against universal screening, ie, testing asymptomatic seniors.

### Testing for Cognitive Impairment

MCI can be difficult to diagnose. Observation of patient behavior during a wellness visit may miss signs of MCI. Subjective reports of brain health provided by patients or their family members may be unreliable. Consequently, cognitive assessment tools have been developed as objective tests for MCI and dementia. Most of these are paper-based tests; however, electronic versions are available.<sup>1</sup>

### To Screen or Not to Screen for Cognitive Impairment

There is general agreement that patients showing signs of cognitive impairment should be tested using objective cognitive assessment tools.<sup>4-7</sup> However, experts do not agree on whether asymptomatic elderly people should be screened.

The US Preventive Services Task Force (USPSTF) and the Canadian Task Force on Preventive Health Care (CTFPHC) do not recommend universal screening.<sup>4,5</sup> They argue that:

- There is insufficient data to evaluate the benefits, or harms, of universal screening (USPSTF).
- Established cognitive assessment tools misdiagnose 10% to 25% of normal patients as having MCI (CTFPHC).
- If MCI is detected, little can be done to improve the patient's condition.

The International Association of Gerontology and Geriatrics (IAGG) recommends screening be performed for all patients over 70.<sup>6</sup> The Affordable Care Act aligns with this position, calling for screening as part of the annual wellness visit for Medicare patients.<sup>7</sup> The IAGG based its position on these points<sup>6</sup>:

- Cognitive decline may be delayed or reduced by medication and lifestyle interventions.
- If MCI is caused by a treatable condition, something can be done to reduce or resolve it.



### Mild Cognitive Impairment

MCI is a small but measurable decline in cognition. About 33% to 38% of people with MCI will develop dementia within 5 years.<sup>2,3</sup> Thus, identifying MCI can be the first step for assessing the risk of dementia.

### Dementia Is Not Just Alzheimer Disease

About 60% to 80% of all dementias are caused by Alzheimer disease.<sup>5</sup> Other forms include vascular and Lewy body dementia; frontotemporal lobar degeneration; Creutzfeldt-Jakob, Parkinson, and Huntington disease dementia; and AIDS-related dementia.

Some causes of dementia are treatable. These include drug-drug interactions, vitamin B12 deficiency, alcohol or drug abuse, thyroid problems, depression, autoimmune disease, or trauma. Following successful treatment, symptoms of dementia may be completely or partially reversed.

- Fairly accurate tests are available for assessing patients including the Mini-Mental State Examination (MMSE), MiniCog, and the Memory Orientation and Screening Test (MOST).

## How Quest Diagnostics Can Help

Quest offers an electronic diagnostic test called CogniSense™, an iPad®-based version of the MOST. CogniSense can be used to objectively assess MCI and dementia. Comparisons suggest that MOST is more accurate than MMSE.<sup>8</sup> CogniSense and the paper-based version of MOST classify patients with the same accuracy.<sup>1</sup>

CogniSense can be downloaded from the Apple App store, and patient results can be integrated into Quest's Care360® electronic health record system. This allows patient results to be easily tracked over time and easily accessed by other healthcare providers. In addition to aiding in assessment of MCI and dementia, CogniSense can also help assess cognitive impairment resulting from alcohol or drug use and concussion, as well as improvement during recovery.

To learn more go to [QuestCogniSense.com](http://QuestCogniSense.com).

## References

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# Spotlight on Health

## Testing Brain Health

Some seniors may have a harder time finding the right word than they did when they were young. Some might find learning new things a little more difficult. They might get more easily sidetracked when doing things. This is because aging can affect parts of the brain that control memory, learning, and attention.

Some of these changes are normal but some are not. Changes in the brain that impact daily life are not normal. Often forgetting to pay bills or take medicines may mean that brain health is declining. Some things that change brain health for the worse can be treated. If treatment is a success, brain health may go back to normal.<sup>1</sup> Treatment of other things, like Alzheimer disease, does not improve brain health.

In this month's Spotlight on Health, we talk about testing for brain health. We also discuss what can be done if brain health is declining.

### How Do You Measure Brain Health?

To find out if there are problems with brain health, doctors may just talk to their patients and observe how they respond. They may also ask the patient's loved ones if they have any concerns. The problem with this approach is that it is subjective.

An objective way is for doctors to use tests. Just as weight and blood pressure measure general health, there are tests that measure brain health. These tests may be performed during annual wellness visits and may be covered by Medicare.<sup>2</sup>

There are many tests for brain health. The one Quest Diagnostics offers is called CogniSense™. CogniSense is an iPad®-based test that takes about 10 minutes. It consists of:

- Listening to and remembering 3 words
- Saying the current date, season, and day of the week
- Drawing a clock and filling in the numbers and the time
- Showing a specific time by drawing in the hands of the clock
- Naming 8 pictures of household items and remembering them later in the test

The test can let the doctor know if there may be mild memory problems or dementia. It can be repeated later to find out if brain health is getting better or worse.

### What if Test Results Suggest a Decline in Brain Health?

If test results suggest dementia or a decline in brain health, the doctor will look for a cause. Some causes of dementia can be treated (see sidebar). If that's the case, signs of dementia may go away after treatment.



### Causes of Dementia That Can Be Treated<sup>3</sup>

- Some types of medicines
- Drug and/or alcohol abuse
- Not enough folate or vitamin B12 in the diet
- High and low blood sugar
- Not making enough thyroid hormone
- Too much fluid in the brain (caused by an infection, head injury, tumor, or stroke)
- Depression
- Blood that collects between the brain and its outer covering
- Problems with kidney, liver, and/or lung

Some types of dementia can't be cured (see sidebar). Patients can still be helped by a diagnosis, though. A diagnosis can help patients to<sup>4</sup>:

- Understand why they are having problems
- Give directions now about how to manage future financial, legal, and healthcare matters
- Take steps now to prevent use of dangerous tools or driving when the dementia gets worse
- Get help from groups that deal with dementia
- Join in activities organized by these groups
- Try one or more drugs that might help lessen symptoms
- Sign up to try drugs in experimental trials

Diagnosis of a loved one can help caregivers<sup>4</sup>:

- Get trained on managing people with dementia
- Plan to manage their personal health and stress while giving care
- Make sure their loved one takes all needed medicines

## How Quest Can Help

Quest provides the CogniSense test mentioned above. It's an objective test for brain health. Unlike most subjective tests, it directly measures brain function. Since it is an iPad-based test, doctors can easily upload results to a patient's electronic health record. This helps the doctor track a patient's progress over time.

## Additional Information

Brain Health As You Age: [ACL.gov/Get\\_Help/BrainHealth/](http://ACL.gov/Get_Help/BrainHealth/)

## Types of Dementia That Can't Be Cured<sup>3</sup>

- Alzheimer disease
- Vascular dementia caused by multiple small strokes
- Frontotemporal dementia (including Pick disease)
- Lewy body dementia
- AIDS dementia complex
- Creutzfeldt-Jakob "mad cow" disease
- Huntington disease
- Parkinson disease

## References

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