

About Mild Cognitive Impairment (MCI)

Mild cognitive impairment (MCI) is a general term most commonly defined as a subtle but measurable memory disorder. A person with MCI experiences memory problems greater than normally expected with aging, but he or she does not show other symptoms of dementia, such as impaired judgment or reasoning.

Compared with the large body of information about Alzheimer's disease, research about MCI is relatively small. Because scientists are still answering basic questions about this disorder, it is important to note that the definition of MCI is itself a "work in progress."

Defining MCI

In 2001, the American Academy of Neurology (AAN) published practice guidelines for the early detection of memory problems. The AAN workgroup of specialists identified the following criteria for an MCI diagnosis:

- an individual's report of his or her own memory problems, preferably confirmed by another person
- measurable, greater-than-normal memory impairment detected with standard memory assessment tests
- normal general thinking and reasoning skills
- ability to perform normal daily activities

These criteria do not settle all debate about MCI. Key questions that researchers continue to investigate include the following:

1. How much memory impairment is too much to be considered more than normal?
2. How much memory impairment is significant enough to be considered a symptom of mild dementia?
3. How hard should one look for subtle abnormalities in other areas of thinking?
4. How do we know if these other changes are normal aging or worse?

Because researchers are still investigating these questions, other details about MCI remain unclear. For example,

some research suggests that essentially all cases of MCI progress to Alzheimer's disease or another form of dementia. This would mean that MCI is simply a very early sign of dementia. Other studies suggest that some people with MCI may not develop dementia, but that many are at a very high risk of developing the disorder. Still other studies indicate that people diagnosed with MCI may "revert" to normal.

The need for further research about MCI

The differences in these conclusions are the result, at least in part, of significant inconsistencies in definitions of MCI. For example, some definitions involve problems with other aspects of thinking, not only memory. The different findings also point to the need for long-term studies that follow the progression of symptoms in people with differently defined MCI. More work is also needed on the biological changes associated with normal aging, MCI, and Alzheimer's disease and other dementias.

In the December 2001 issue of *Archives of Neurology*, a team of specialists recommended further research to define subcategories of MCI. For example, a problem with language rather than memory may be considered a mild cognitive impairment that is an early sign of dementia other than Alzheimer's.

A clearer picture of MCI is also relevant in efforts to prevent or delay the onset of Alzheimer's disease. Current clinical trials are testing potential preventive therapies, including vitamin E, nonsteroidal anti-inflammatory drugs and *Ginkgo biloba*. Other clinical trials are testing compounds that may interfere with key disease processes in the Alzheimer brain. When and if these trials demonstrate a preventive benefit, our ability to identify people with MCI and those most at risk for developing dementia will be critical to early intervention.

What does a diagnosis mean for an individual?

Because there is a lack of agreement about a definition, any two individuals with a diagnosis of MCI may have relatively significant differences in symptoms. Physicians' recommendations for treatment will also vary. In most cases, if a person is diagnosed with MCI, the physician will regularly monitor the individual for changes in memory and thinking skills that indicate a worsening of symptoms or a development of mild dementia.

The drugs approved by the U.S. Food and Drug Administration (FDA) for treating symptoms of Alzheimer's disease were investigated in large-scale clinical trials with people diagnosed with mild to moderate Alzheimer's. Although some smaller trials have tested the effect of these drugs to treat MCI, there is not enough evidence to suggest a standard course of treatment. Nonetheless, some physicians may prescribe FDA-approved Alzheimer medications and vitamin E supplements to treat symptoms associated with MCI. Large-scale trials of several medications are now under way to test treatments for MCI.

Sources

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The Alzheimer's Association is fighting on your behalf to give everyone a reason to hope. For more information about Alzheimer research, treatment and care, please contact the Alzheimer's Association.

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Fact sheet updated **June 2, 2004**