UCSF Memory and Aging Center

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Mild Cognitive Impairment

What is mild cognitive impairment (MCI)?

In contrast to Alzheimer's disease (AD) [8] where other cognitive skills are affected, mild cognitive impairment (MCI) is defined by deficits in memory that do not significantly impact daily functioning. Memory problems may be minimal to mild and hardly noticeable to the individual. Writing reminders and taking notes allow a person to compensate for memory difficulties. Unlike AD where cognitive abilities gradually decline, the memory deficits in MCI may remain stable for years. However, some individuals with MCI develop cognitive deficits and functional impairment consistent with AD. Whether MCI is a disorder distinct from AD or a very early phase of AD is a topic of continuing investigation.

The diagnosis of MCI relies on the fact that the individual is able to perform all their usual activities successfully, without more assistance from others than they previously needed.

Signs & symptoms of mild cognitive impairment (MCI)

Typically, memory complaints include trouble remembering the names of people they met recently, trouble remembering the flow of a conversation and an increased tendency to misplace things or similar problems. In many cases, the individual will be quite aware of these difficulties and will compensate with increased reliance on notes and calendars. These problems are similar, but less severe, than the neuropsychological findings associated with Alzheimer?s disease. In some cases, the patient may have mild difficulties with daily activities, such as performing hobbies.

The medical evaluation should include a thorough exploration of the memory complaints, including what type of information is being forgotten and when, the duration of the problem, and whether other cognitive complaints are occurring (problems with organization, planning, visuospatial abilities, etc.). The physician should be aware of the patient?s medical history, the medications taken, etc. As subjective memory complaints can be associated with depression, screening for depressive symptoms is always warranted. Depending on the results of this evaluation, further testing may necessary, including blood-work and brain imaging. This evaluation is similar to that given to individuals with more severe memory problems, and is directed towards better defining the problem and looking for medical conditions that might have an effect on the brain (infections, nutritional deficiencies, autoimmune disorders, medication side effects, etc.). The medical history

usually requires the participation of a knowledgeable informant.

Additional assessment could include neuropsychological testing to document objectively any memory deficit and to assess its severity. Although normal performance on neuropsychological testing does not guarantee that the individual will not develop dementia, the current data indicate that normal results are relatively reassuring, at least for the next few years.

Progression of mild cognitive impairment (MCI)

Certain features are associated with a higher likelihood of progression from MCI to Alzheimer's. These include confirmation of memory difficulties by a knowledgeable informant (such as a spouse, child or close friend), poor performance on objective memory testing, and any changes in the ability to perform daily tasks, such as hobbies or finances, handling emergencies or attending to one?s personal hygiene.

Treatment of mild cognitive impairment (MCI)

There is currently no specific treatment for MCI. As new medical interventions for Alzheimer?s disease are developed, these are likely to be tried on patients with MCI as well. If data from such trials indicates a beneficial effect in slowing cognitive decline, the importance of recognizing MCI and identifying it early will increase. However, it is important to remember some drugs may impair memory, especially in older adults. Examples are Valium®, Ativan®, Benadryl®, Tylenol PM®, Advil PM® (both contain Benadryl®), Cogentin® and many others. A very careful assessment of medications is essential when considering a diagnosis of MCI.

A general recommendation for individuals concerned about their memory would be to discuss these concerns with their significant other (friend, spouse, child, etc.), as well as their physician. Bringing the outside informant to the physician appointment is often very helpful in the evaluation process.

Resources for mild cognitive impairment (MCI)

- The Alzheimer's Association [9] is a voluntary health organization in Alzheimer care and support and a private, nonprofit funder of Alzheimer research.
 - Northern California and Northern Nevada chapter [10]
- Alzheimer's Disease Education and Referral (ADEAR) Center [11] website provides current, comprehensive Alzheimer's disease information and resources from the National Institute on Aging (NIA).
 - Alzheimer's Disease Fact Sheet [12]
 - Find an Alzheimer's Disease Center (ADC) [13]
- Family Caregiver Alliance [14]

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- [8] http://memory.ucsf.edu/education/diseases/alzheimer
- [9] http://www.alz.org
- [10] http://www.alz.org/norcal
- [11] http://www.nia.nih.gov/Alzheimers
- [12] http://www.nia.nih.gov/Alzheimers/Publications/adfact.htm
- [13] http://www.nia.nih.gov/Alzheimers/ResearchInformation/ResearchCenters
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