

## **Mild Cognitive Impairment (MCI)**

Memory loss has long been accepted as a normal part of ageing. Recently there has been increasing recognition that some people experience a level of memory loss greater than that usually experienced with ageing, but without other signs of dementia. This has been termed Mild Cognitive Impairment (MCI). As MCI has only recently been defined, there is limited research on it and there is much that we do not yet understand.

This Update Sheet provides some basic information about MCI and what it means to be told that you have MCI.

### **What is MCI?**

MCI is generally defined as significant memory loss without the loss of other cognitive functions. People with MCI have more memory problems than would be expected from someone at a similar age. People with MCI are able to function independently and do not show other signs of dementia, such as impaired reasoning or judgment.

Typical complaints from people with MCI include having trouble remembering names of people they met recently, remembering the flow of a conversation and a greater tendency to misplace things.

People with MCI can usually accomplish all of their daily tasks, but often compensate for their memory problems by relying on memory prompts such as reminder notes or calendars.

In 2001, the American Academy of Neurology (AAN) set the following criteria for use by medical practitio-

ners in determining if a person has MCI:

- report of 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.

A recent update of these criteria does allow the person to be unaware of the memory problems, and also allows more complex activities, such as managing finances, to be affected.

Determining if a person has MCI can be problematic because it is difficult to define how much memory impairment is considered 'more than normal'. Currently, a great deal of research is being conducted into MCI.

## How is MCI detected?

MCI is usually detected by using similar testing methods to those used for dementia. This begins with the doctor talking to both the person and, if possible, a friend or family member, to get a thorough understanding of the person's medical history, the medication they are taking, the memory problems they are experiencing and any other relevant information.

A physical examination and blood tests may be done in order to rule out other causes of memory loss such as depression, stress, medication problems or a nutritional deficiency.

People suspected of having MCI will also be tested with general tests for cognition and memory function such as those used in diagnosing dementia.

## Does MCI lead to dementia?

Recent studies indicate that people with MCI are more likely to develop dementia, especially Alzheimer's disease. It is currently estimated that people with MCI have a 3 to 5 times increased risk of developing dementia than others their age.<sup>1</sup>

A large treatment trial with selected people with more severe diagnosis of MCI found that about 15% of

subjects progressed to dementia each year.

However, MCI does not always lead to dementia and can take many years to do so. In tests conducted regularly over a number of years, a substantial proportion of people with MCI have remained stable or even improved. Various studies show differing results in their estimates of how many people with MCI will progress to dementia.

## Can MCI be treated?

Currently, there is no specific treatment for MCI. A number of studies are investigating different treatments, such as the cholinesterase inhibitors used to treat Alzheimer's disease, Ebixa, non-steroidal anti-inflammatory drugs (NSAIDS), Vitamin E and statins (for controlling cholesterol).

At this stage no drug therapy for MCI has proven effective, but work continues.

As new medical treatments for Alzheimer's disease arise, it is likely that they will also be tested in people with MCI. Studies involving drug trials have shown preliminary evidence that drug treatments can effectively delay the progression to dementia.

Cognitive training (exercising the mind and memory) has been suggested as useful for MCI and it is important to maintain a healthy diet, have regular physical exercise and maintain good general health – particularly controlling blood

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<sup>1</sup> Petersen, R.C. et al. Practice parameter: early detection of dementia: mild cognitive impairment (an evidence-based review). Report of the Quality Standards Subcommittee of the American Academy of Neurology. *Neurology* 56, 1133-42 (2001).

pressure, lowering cholesterol levels and stopping smoking.

In most cases a person diagnosed with MCI will not undergo any medical treatment as such, but will be regularly monitored for changes in their memory. Counselling may assist people with MCI to find ways to adjust to the changes they are experiencing and to learn about ways to compensate for their memory difficulties.

### Implications of MCI

The implications of detecting MCI can be viewed as mostly positive. Many people with MCI are very aware of their memory problems and are often concerned that they have dementia. Knowing that they have MCI confirms to them that their memory concerns are valid and they can feel reassured to know that having MCI does not necessarily mean they will develop dementia.

Knowing that they are at a higher risk of developing dementia also allows people with MCI to plan for the possibility that they may deteriorate in the future, to evaluate their support systems and to make important legal, financial and personal decisions such as powers of attorney. They can also take steps to establish and maintain a healthy lifestyle.

Regular monitoring is critical since the borderline between normal age-related memory difficulties and dementia will vary for each individual. Detection and monitoring of MCI allows dementia to be

identified at an early stage. Given that most of the drugs currently used to treat Alzheimer's disease are at their most effective in the early stages of the condition, early identification of dementia means the person can make their choices about taking this medication at the most optimum time. People can then also be assisted with information and support services.

As new treatments for dementia become available, it is likely that detection of MCI will become even more important. In addition, approaches to prevent dementia can be expected to be potentially helpful to those with MCI.

*This Update Sheet is provided for your information only, and does not represent an endorsement of any treatment by Alzheimer's Australia.*

*Thanks to Associate Professor Michael Woodward for reviewing this material.*

### Further Information

A range of books and videos, Help Sheets and Update Sheets are available through Alzheimer's Australia in your State or Territory by contacting the National Dementia Helpline.

Help Sheets and Update Sheets, including any more recent information, can also be obtained on the internet at [www.alzheimers.org.au](http://www.alzheimers.org.au)