Alzheimer's Australia
Living with dementia

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# Mild Cognitive Impairment (MCI)

Some deterioration of memory and other cognitive (thinking) functions has long been accepted as a normal part of ageing. Recently there has been increasing recognition that some people experience a level of cognitive impairment greater than that usually experienced with ageing, but without other signs of dementia. This has been termed Mild Cognitive Impairment (MCI). As MCI is a relatively new concept, there is ongoing research 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 impairment in cognitive abilities greater than expected for age, but not significant enough to warrant a diagnosis of dementia. People with MCI have more memory or other thinking problems than would be expected from someone at a similar age, and show some decline in their cognitive skills. People with MCI are able to function independently and do not have dementia.

The types of difficulties experienced by someone with MCI vary from person to person, but often involve problems with memory. They may also involve problems with language, attention, processing visual and spatial information, complex thinking functions, or problems in a combination of these areas.

These problems are less severe than those experienced by people with dementia and people with MCI can usually accomplish all of their daily tasks. They may compensate for their cognitive problems by relying on prompts and reminders.

The following criteria are used by medical practitioners in determining if a person has MCI:

- report of cognitive problems, preferably confirmed by another person
- measurable, abnormal cognitive function detected with standard assessment tests
- evidence of decline in one or more cognitive skills
- essentially normal ability to perform daily activities
- absence of dementia

Determining if a person has MCI can be problematic because it is difficult to define how much cognitive impairment is considered 'more than normal' for the person's age.

There is some controversy about the usefulness of the clinical category of MCI. Some experts suggest it should be dropped from diagnostic criteria. However, a survey of Australian clinicians found that most were diagnosing MCI and felt it was important to distinguish it from dementia and from normal ageing. Currently, a great deal of further 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 and other cognitive 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 cognitive impairment 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?

Research does indicate that people with MCI are more likely to develop dementia, especially Alzheimer's disease. In fact, MCI is often thought of as a transitional state between normal ageing and early dementia. Some researchers suggest that it would be best to drop the category of MCI and concentrate efforts on earlier diagnosis of dementia.

However, MCI does not always lead to dementia and when it does can take many years to do so. A substantial proportion of people diagnosed with MCI are found to have stable or even improved cognitive function when it is retested over time.

Various studies show differing results in their estimates of how many people with MCI will progress to dementia, but typically it is reported that 10% to 15% of people with MCI progress to dementia per year. In the general population, only 1% to 2% of older people develop dementia per year. So having MCI considerably increases the likelihood of subsequently developing dementia.

Research is continuing into why some people with MCI progress to dementia while others do not, and into how to predict whether a person with MCI will go on to develop dementia.

## Can MCI be treated?

Currently, there is no specific treatment for MCI. A number of studies are investigating different treatments, such as the drugs used to treat Alzheimer's disease, non-steroidal anti-inflammatory drugs

(NSAIDS), vitamin E and statins (used for controlling cholesterol).

There is some preliminary evidence that cholinesterase inhibitor drugs used to treat Alzheimer's disease might delay the progression from MCI to dementia, but other studies have not shown this and more research is needed. At this stage no drug therapy for MCI has proven effective, but clinical trials are continuing around the world.

Cognitive training (exercising the mind and memory) has been suggested as potentially useful for MCI, as several studies has shown that frequent participation in mentally stimulating activities is associated with lower risk of cognitive decline. Research has also demonstrated the importance of maintaining a healthy diet and regular physical exercise for keeping the brain healthy as we age. Treating vascular risk factors such as high blood pressure and high cholesterol may also reduce the risk of cognitive decline. Further research is needed to understand the relationships between these lifestyle and health factors and the progression of MCI.

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 and other cognitive abilities. 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 cognitive difficulties.

## Implications of MCI

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

Knowing that they are, however, 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 course of cognitive changes with MCI will vary for each individual. Detection and monitoring of MCI allows dementia to be identified at an early stage if it does develop. Given that most of the drugs currently used to treat Alzheimer's disease are most effective in the early stages of the condition, early identification of dementia means the person can make choices about taking medication at the most optimum time. People can then also be

assisted with information and support services to help them live with dementia and plan for their future needs.

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.

## References

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

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**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 on 1800 100 500.

Help Sheets and Update Sheets, including any more recent information, can also be obtained on the internet at *www.alzheimers.org.au*