

UPDATE SHEET 10

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Mental Exercise and Dementia

Exercising the brain is an important, enjoyable part of everyday life for everyone. It has a part to play in a positive, healthy lifestyle in the same way as physical exercise. Stimulating leisure and social activities are also thought to be important in maintaining a healthy brain.

In recent years there has been considerable interest in researching the role that mental exercise may play in reducing the risk of developing dementia and the benefits it offers to people with dementia.

This Update Sheet outlines the part that exercising the brain can play in promoting a healthy lifestyle and its potential to reduce the risk of dementia and benefit people with dementia.

Related information is also available in the following resources:

Update Sheet 9 Physical Exercise and Dementia

Update Sheet 11 What you Eat and Drink and Your Brain

Mind your Mind How to keep your brain healthy and reduce your risk of dementia

Paper 13 Dementia Risk Reduction: The Evidence

Mental exercise may reduce the risk of dementia

Keeping the brain active is thought to build reserves of healthy brain cells and connections between them. The role that exercising the brain may play in reducing the risk of developing Alzheimer's disease and other forms of dementia has therefore been the subject of considerable research.

Numerous studies have shown that engaging in more mentally stimulating activities throughout life is associated with better cognitive function, reduced cognitive decline and a reduced risk of developing dementia. Studies of large groups of people have shown that those who achieve higher levels of education, have more mentally demanding occupations, or participate in higher numbers of mentally stimulating leisure activities have around a 50% lower risk of developing dementia.

Activity that exercises the brain may build brain reserve that helps to compensate for the damage caused by Alzheimer's or other diseases. Because the brain is able to compensate and keep functioning well, the onset of dementia may be delayed.

What brain exercises?

Mental exercise can and should be a very enjoyable part of life. Almost any type of mental activity may be beneficial, but they should involve new learning and be reasonably complex, varied and interesting, and engaged in frequently.

Some activities that involve exercise for the brain, and have also been associated with reduced dementia risk as part of a mentally active lifestyle, are:

- Reading
- Listening to the radio
- Visiting museums
- Taking a course
- Learning a new language
- Playing musical instruments
- Artistic and other hobbies
- Participation in leisure activities such as sports, hobbies, dancing, gardening, groups, cultural activities and conversation
- Board games
- Crosswords
- Sudoku and other puzzles

Many of these activities involve social interaction and physical activity as well. Recent research suggests that combining mental, social and physical components in leisure activities offers the greatest benefit in terms of reducing dementia risk.

Commercial brain training games and computer programs have as yet not been shown to reduce the risk of dementia.

While exercising the brain has not been proven to prevent dementia, it may reduce the risk or delay the onset of dementia, and the general health benefits of these activities are well established.

Mental exercise for people with dementia

Research has also looked into whether exercising the brain can improve the thinking capacity of people with dementia or slow the rate of cognitive decline, and how exercising the brain can contribute to a better quality of life for people with dementia and their families and carers.

There is evidence that cognitive and functional decline in people with dementia may be delayed by continued participation in mentally stimulating activities. People with dementia should be encouraged, as far as possible, to maintain their usual hobbies and activities. While adjustments may be needed as dementia progresses, keeping socially involved and mentally active may be important for the person's cognition, daily functioning and mental wellbeing.

What brain exercises for people with dementia?

People in the early stages of dementia may choose from a range of brain exercises such as those listed above. People in later stages of dementia may enjoy simpler exercises that relate to their own interests and capabilities. Such exercises could include:

- Doing simple calculations
- Reading aloud from books
- Storytelling, including brief stories and role playing in longer stories, to help

increase attention and participation and to stimulate emotions and memories

- Imagery exercises to stimulate the senses, such as recalling a peaceful nature scene
- Dancing
- Playing musical instruments
- Listening to music

Keeping involved and active in the things they enjoy is extremely important for people with dementia. Rather than giving up activities that are becoming difficult, it may be possible to modify the activity or break it down into manageable parts. Avoid choosing activities that are beyond the person's capabilities as this may result in frustration and a sense of failure.

There may also be an opportunity to try something new, such as a new hobby or creative pursuit, that may be enjoyed and contribute to mental stimulation.

Interaction with other people, social participation and communication may be as important for the person with dementia as any direct benefits from mental activity itself.

The importance of reducing stress

It is important for everyone to try and reduce stress as much as possible. Excessive stress can result in reduced memory capacity, as well as adverse physical responses such as poor sleep. For people with dementia, avoiding doing more than they can cope with or more than one thing at a time can help prevent stress.

Both physical and mental exercise are very good ways of dealing with stress and with its accompanying effects. Using the brain to undertake challenging tasks may remove attention from some of the causes of stress.

More research is needed

Research into the causes, risk reduction and treatment of dementia is ongoing and more such studies are needed. More research is being done to better understand the mechanisms of the link between mental exercise and reduced dementia risk. In the meantime, regular mentally stimulating activities are recommended to help keep the ageing brain functioning well and reduce cognitive decline.

Research shows that there are health and lifestyle factors that indicate greater risk of developing dementia. While you may reduce that risk or delay the onset of dementia with physical exercise, mental exercise and improved diet, these activities do not guarantee prevention of dementia.

Suggested further reading

Think or Sink. An article reprinted from The Weekend Australian Magazine, December 2-3, 2006. Available from the Alzheimer's Australia Mind your Mind website at <http://www.mindyourmind.org.au/file/Think%20or%20Sink.pdf>

The Mind your Brain section of Alzheimer's Australia's Mind your Mind website provides information about the benefits of mental exercise and advice on how to exercise your brain. Go to <http://www.mindyourmind.org.au/mind-your-mind/mind-your-brain>

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

Further Information

A range of books, DVDs, 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 can also be obtained online at www.alzheimers.org.au