

Hearing loss and dementia

Hearing loss can increase the risk of dementia in later life. This help sheet provides information on what we know about the link between hearing loss, dementia, and old age, as well as where you can find help.

What is hearing loss?

Hearing loss due to normal ageing (presbycusis) is one of the most common conditions affecting older adults. Over half of Australians aged between 60 and 70 experience some kind of hearing difficulty, which may be very debilitating. An early sign of age-related hearing loss is trouble hearing what other people say to you, especially in noisy environments. These symptoms often start gradually, and it may be years before you notice the condition. This makes early detection and treatment difficult. In fact, on average people wait seven years to seek treatment following a diagnosis. But it is important to seek assistance as soon as you can since the earlier hearing loss is diagnosed and treated, then the greater the impact of hearing interventions. It is also important to seek assistance because hearing health is related to brain health.

What is the relationship between hearing loss and dementia?

Research has identified a number of factors that may increase the risk of developing dementia as well as a number of factors that may reduce your risk. Risk factors, some of which may be managed through lifestyle changes or appropriate medical treatment, include:

- low mental and social stimulation
- physical inactivity
- depression
- obesity
- diabetes
- hypertension
- smoking
- excessive alcohol use
- poor diet
- genetic factors

Age-related hearing loss is another factor that increases the risk of dementia. Research suggests that people with mild symptoms of hearing loss may be twice as likely to develop dementia as those with healthy hearing. People with severe hearing loss may be five times more likely to develop dementia (to read more about these research findings by Professor Frank Lin and colleagues from Johns Hopkins School of Medicine, see references on last page).

It is important to remember, however, that hearing loss is only a risk factor, and having any form of hearing loss does not mean that a person will develop dementia.

Research has shown that hearing difficulties may reduce quality of life through social isolation, feelings of loneliness and depression, and a loss of independence. These factors in turn may increase the risk of developing dementia. Alternatively, hearing loss may place an additional load on the mental resources of a vulnerable brain as the person who has difficulty hearing works harder to decode and process sounds. This additional load may mean that there are fewer resources for memory, understanding speech, and other cognitive functions, and this may lead to changes in the brain. It also is possible that the neurological process that leads to dementia is the same process that leads to age-related hearing loss. Researchers are working hard to identify the reasons for the link between hearing loss and dementia (to read more about research on these potential risks and their link with dementia, see references on last page).

What can be done?

There are a range of lifestyle changes that may help reduce the risk of developing dementia, including:

- healthy eating
- engaging in regular physical exercise
- stimulating or challenging your mind (e.g. by learning new things)

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dementia.org.au

- keeping socially active and engaged

These are 'modifiable risk factors', meaning that people have the ability to change their risk of developing dementia with the things they do every day. Unmanaged hearing loss is another clear modifiable risk factor for dementia (to read more about these research findings by Professor Gill Livingston and colleagues from University College London, see references on last page). Early identification and treatment of hearing difficulties may help lower the risk of dementia.

Identifying and assessing a hearing problem

If you or a member of your family, a friend, or colleague notices you are having difficulty hearing, then **the first step is to talk to your GP**. Signs of hearing loss include:

- trouble playing your usual part in conversations with your family or friends
- asking people to repeat what they have said more often
- avoiding having phone conversations and letting others take messages or talk for you
- finding noisy environments challenging and tiring
- turning the radio or television up louder than you used to
- feeling isolated from others

If you or others have concerns about your hearing, don't delay in making an appointment with your GP. Early diagnosis and immediate intervention are important. Your GP will refer you for an assessment with an audiologist who will determine the type and magnitude of the hearing loss and provide solutions for managing it. Some hearing services are subsidised by the Australian Government (for more information, see hearingservices.gov.au) or some types of private health insurance.

Fitting hearing aids or implantable hearing devices

Hearing devices often are an important part of managing hearing loss. Devices include:

- hearing aids
- cochlear implants
- assistive listening devices that help with specific problems (e.g. hearing the television)

Your audiologist will advise you of the most appropriate type of device needed to address your hearing problems. Hearing aids are programmed to match the type and magnitude of hearing loss, and your audiologist will help you learn to use them. It may take time to adjust to the sound of the hearing device, but your audiologist will offer strategies to make this easier. Implantable hearing devices, such as bone anchored hearing aids or cochlear implants, are recommended for people with certain, less common types or magnitudes of hearing loss. For example, bone anchored hearing aids are recommended for some conductive hearing losses (where conventional hearing aids are unsuitable), whereas cochlear implants may be recommended for more severe-to-profound hearing losses.

Getting the most out of your hearing

Hearing devices coupled with communication strategies, such as facing the person you are talking with, reducing background noise, and talking and listening in a well-lit area, will assist you to hear better. Hearing devices help ensure you receive mental and social stimulation from auditory information. Hearing better also improves your quality of life, reducing social isolation and depression, which further lessens the risk of dementia. With your improved hearing, the final step is to become active and stay active – physically, mentally and socially.

Some of the greatest preventative choices you can make to reduce your risk of dementia include:

- regular exercise
- regularly challenging your brain
- regular social contact
- conversation and communication

Acknowledgements

This help sheet was prepared by a group based in The Australian Hearing Hub (<http://hearinghub.edu.au>) at Macquarie University, including experts from Australian Hearing, the National Acoustic Laboratories, the Australian Research Council Centre of Excellence in Cognition and its Disorders, the Macquarie Centre for Implementation in Hearing Research, the Macquarie Centre for Emotional Health and Macquarie University's Faculty of Medical and Health Sciences. These clinicians and researchers are working together to promote and support hearing, cognitive, and emotional health for all Australians across their lives.

The following organisations, Better Hearing Australia (betterhearingaustralia.org.au) and SHHH – Self Help for Hard of Hearing People (shhhaust.org) also offer valuable information and support.

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References

1. Professor Frank Lin and his colleagues from Johns Hopkins School of Medicine published a 2011 article in Archives of Neurology reporting that severity of hearing loss is associated with incidence of dementia: ncbi.nlm.nih.gov/pmc/articles/PMC3277836/. Read more about Professor Lin's work here: linresearch.org
2. Professor Gill Livingston and her colleagues from University College London published a 2017 article in The Lancet summarising 13 studies that investigated the link between hearing loss and risk of cognitive decline and dementia (within a broader analysis of a large set of potential risk factors for dementia). They reported that mid-life hearing loss is a significant but potentially modifiable risk factor for dementia and argued that management of hearing loss might help delay or prevent dementia cases: discovery.ucl.ac.uk/1567635/. Read more about Professor Livingston's work here: iris.ucl.ac.uk/iris/browse/profile?upi=GALIV58

FURTHER INFORMATION

Dementia Australia offers support, information, education and counselling. Contact the National Dementia Helpline on **1800 100 500**, or visit our website at dementia.org.au



For language assistance phone the Translating and Interpreting Service on **131 450**