



signia

Hearing loss and dementia.

Information for your patients.

As a physician, you probably ask your patients if they have had their hearing checked recently. Patients may also seek you out for information about getting their hearing checked. Outside of referring them to get a test or scan it is important to let them know of the potential health risks of ignoring their hearing loss. Some of those risks can include life-threatening disorders like **Dementia**.

There is a strong link between untreated hearing loss and the development of dementia and Alzheimer's disease.

You may have heard about the links between untreated hearing loss and Dementia. This link is becoming stronger as more studies shed light on hearing loss and how it can increase the risk of developing dementia if left untreated.

*"Seniors with hearing loss are significantly more likely to develop dementia over time than those who retain their hearing... Our findings emphasise just how important it is for physicians to discuss hearing with their patients and to be proactive in addressing any hearing declines over time."*³

Timothy D. Griffiths in a 2020 meta-analysis estimated that hearing loss accounted for up to 9% of dementia cases.⁴

Addressing hearing loss early in more people could help reduce the number of Australians suffering from the disease. This is not the only meta-analysis - Zheng Liang also conducted a meta-analysis that showed a link between dementia, Alzheimer's and hearing loss. They concluded hearing loss may increase the risk of dementia in the adult population⁵. Leaving hearing loss untreated could pose a serious risk that has not been widely shared with the hearing-impaired population. Providing this information will encourage patients and their loved ones to make more informed and timely decisions about their hearing care.

Hearing loss may account for

9%

of dementia cases⁴

How hearing loss can lead to dementia

Dr. Lin and other experts put forth several theories as to why hearing loss may lead to dementia and Alzheimer's disease:



Can it be treated?

It seems like early diagnosis and treatment of hearing loss slows the progression of dementia and Alzheimer's disease. In January 2014, Frank R. Lin, MD, Ph.D and his team released results regarding changes in the brains of adults with normal hearing to those of adults with hearing loss.

After undergoing magnetic resonance imaging (MRI) exams every year for ten years, **51 of the 126 participants** examined who had at least a 25-decibel (dB) hearing loss from the start displayed accelerated rates of grey matter shrinkage when compared to the 75 participants with normal hearing. Those with hearing impairments lost more than an additional cubic centimeter of brain matter annually and experienced greater shrinkage of tissue in the structures responsible for processing sound and speech.

The atrophy affected the middle and inferior temporal gyri, which play key roles in memory and sensory integration. Similar damage to these regions can be seen in patients with Alzheimer's disease.

*"Untreated hearing loss is linked to reduced earnings, increased workplace absenteeism, and lower workplace productivity, as well as depression, anxiety, and cognitive decline."*³

What can be done

People with hearing loss on average wait seven years from when they are diagnosed to seek treatment, even though the sooner hearing loss is detected and treatment begins, the more hearing ability can be preserved. Considering early diagnosis and medical intervention also slows the progression of dementia and Alzheimer's disease, it is more important than ever for physicians to encourage patients to get their hearing loss treated sooner rather than later. Treatment with hearing aids not only helps to improve a patient's hearing – it may be the key to preventing brain atrophy and cognitive dysfunction.



¹ Dementia in Australia, Summary - Australian Institute of Health and Welfare (aihw.gov.au)

² Causes of Death, Australia, 2020 | Australian Bureau of Statistics (abs.gov.au)

³ Johns Hopkins Medicine. Hearing Loss Accelerates Brain Function Decline in Older Adults. 2013 (http://www.hopkinsmedicine.org/news/media/releases/hearing_loss_accelerates_brain_function_decline_in_older_adults)

⁴ How Can Hearing Loss Cause Dementia? - PMC (nih.gov)

⁵ University of Pennsylvania – Perelman School of Medicine, Jonathan Peele, Ph.D. 2011 (www.sciencedaily.com/releases/2011/08/110831115946.htm)

⁶ Better Hearing Institute. The Impact of Untreated Hearing Loss on Household Income. Sergei Kochkin, Ph.D. 2005 (http://www.hearing.org/uploadedFiles/Content/impact_of_untreated_hearing_loss_on_income.pdf)

⁷ Alzheimer's Australia. Statistics (<http://www.fightdementia.org.au/understanding-dementia/statistics.aspx>)

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