

Fast Facts: Hearing Loss and Dementia

Key Points

- With a large aging population, dementia is a growing public health crisis.
- Hearing loss is strongly linked to an increased risk of developing dementia.
- Treating hearing loss in older adults at increased risk for cognitive decline slows down loss of thinking and memory abilities.
- Hearing loss is treatable, and there are significant barriers to accessing care.

Dementia is a growing public health crisis. Globally, 47M people in 2015 were living with dementia, and this number is expected to triple by 2050 because of the aging population. In the U.S., this means that 1 of every 30 Americans will be living with dementia in 2050. There are currently no proven therapies that can cure, prevent, or reduce the risk of dementia, but the research on the role of hearing interventions in dementia is promising. (Source: Alzheimer's Association website facts & figures)

Hearing loss is the single risk factor that accounts for the greatest number of dementia cases (1). While there are several risk factors that have been linked to dementia (e.g., low education, high blood pressure, smoking), an international group of scientists convened by the Lancet Commission to examine dementia concluded that *hearing loss accounted for the greatest number of potentially preventable cases of dementia*. One study found that people with a mild, moderate, and severe hearing loss, respectively, had a 2x, 3x, and 5x greater risk of being diagnosed with dementia over time compared to people without hearing loss (2).

Researchers believe that hearing loss increases the risk of developing dementia through its effects on the brain and communication (3). Hearing loss prevents sounds from clearly reaching the brain, forcing the brain to work harder to understand sound. This stress may lead to faster aging of the brain and limit a person's optimal thinking and memory abilities. Hearing loss can also limit our ability to optimally communicate and engage with others which contributes to social isolation and dementia risk.

Treating hearing loss in older adults at increased risk for cognitive decline slows down loss of thinking and memory abilities.

The ACHIEVE study, a multicenter randomized trial that involved 977 older adults ages 70-84 years with untreated hearing loss, found that in older adults at increased risk for cognitive decline, treating hearing loss with hearing aids slowed down loss of thinking and memory abilities by 48% over 3 years. (4)

Hearing loss may be a particularly important target in global efforts to reduce the rate of dementia because hearing loss is very common in older adults but often goes untreated. Treatment of hearing loss with hearing aids does not carry any health risks and has now been shown in the ACHIEVE study to slow down loss of thinking and memory abilities within 3 years for older adults at increased risk for cognitive decline.

Hearing loss is treatable, but there are significant barriers to accessing care. ACHIEVE study findings suggest that treatment of hearing loss may be a low-risk intervention for slowing cognitive decline in

older adults at increased risk for cognitive decline. (4) The National Academies of Sciences, Engineering, and Medicine published consensus recommendations on how to address these barriers in the U.S. (5) One recommendation to create a category of over-the-counter hearing aids to spur innovation and increase affordability was passed into law in 2017. In late 2022, the U.S. FDA issued regulations that allow for hearing aids to be sold over the counter, and this policy will fortunately increase the affordability and accessibility of hearing aids in the U.S.

However, U.S. seniors will still need access to hearing care support services that are not covered by Medicare or nearly any other private insurance plans. Policy changes are needed to increase affordable access and insurance coverage for hearing treatment/intervention. Hearing intervention consists of two components:

- 1. hearing aids and related hearing technologies, and
- 2. the diagnostic and hearing care support services of an audiologist to guide the individual in using these hearing technologies to hear and communicate optimally.

In the U.S., Medicare and nearly all other private insurance plans do not cover either hearing aids or hearing care support services. A Medicare hearing benefit to cover these two components of hearing intervention was included in the 2021 Build Back Better Act but was not passed.

References

- Livingston G, Huntley J, Sommerlad A, Ames D, et al. Dementia prevention, intervention, and care: 2020 report of the Lancet Commission. Lancet. 2020 Aug 8;396(10248):413-446. doi: 10.1016/S0140-6736(20)30367-6. Epub 2020 Jul 30. PMID: 32738937; PMCID: PMC7392084
- Lin FR, Metter EJ, O'Brien RJ, Resnick SM, Zonderman AB, Ferrucci L. Hearing loss and incident dementia. Arch Neurol. 2011 Feb;68(2):214-20. doi: 10.1001/archneurol.2010.362. PMID: 21320988; PMCID: PMC3277836
- 3. Lin FR, Albert M. Hearing loss and dementia who is listening? Aging Ment Health. 2014;18(6):671-3. doi: 10.1080/13607863.2014.915924. PMID: 24875093; PMCID: PMC4075051
- Lin FR, Pike JR, Albert MS, et al. Hearing intervention versus health education control to reduce cognitive decline in older adults with hearing loss in the USA (ACHIEVE): a multicentre, randomised controlled trial. Lancet 2023; published online July 18. https://doi.org/10.1016/S0140-6736(23)01406-X
- 5. National Academies of Sciences, Engineering, and Medicine. 2016. Hearing Health Care for Adults: Priorities for Improving Access and Affordability. Washington, DC: The National Academies Press. https://doi.org/10.17226/23446

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