

Treating hearing loss in older adults slows down cognitive decline

The ears and the brain are equal partners



While the ears pick up auditory signals, the brain gives meaning to the puzzle of sounds.

Hearing loss means...¹

- pieces of the puzzle are missing or blurred, increasing the cognitive load to decipher the message.
- it becomes more difficult to focus on the speaker.
- not only reduced sounds but also a disconnection to our surroundings. The individual is more likely to disengage from their surroundings.
- Currently, **65% of people over age 60** have hearing loss.¹
- Hearing loss has been identified as the largest modifiable risk factor for dementia, contributing 8% to a person's total risk of dementia.²
- Social isolation and loneliness due to hearing loss can have important implications for the psychosocial and cognitive health.³

Hearing Loss



Compromised speech perception



Communication effort
Social engagement



Cognition
Physical function
Quality of life



► The effect of untreated hearing loss on social withdrawal and social isolation should not be underestimated.¹

The benefit of hearing intervention on healthy aging



Latest study results have shown:

- In older adults at increased risk for cognitive decline, hearing intervention slowed down loss of thinking and memory abilities by **48% over 3 years**.⁴
- Individuals in the hearing aid treatment group maintained their cognitive abilities over three years, whereas the participants without hearing intervention showed a decline in cognition over the same time.^{5,6}



Timely identification and management of hearing loss is strongly recommended.⁷

1 Untreated age-related hearing loss is associated with cognitive decline. The risk of dementia increases with the degree of hearing loss. Hearing loss results in reduced communication capability, drives social isolation, and affects cognitive abilities.⁸

2 Comprehensive hearing care including the fitting of hearing aids, can mitigate the risk of cognitive decline in adults with hearing impairment.^{4,5,6}

► Hearing intervention is the treatment of choice to manage hearing loss. The latest evidence speaks for early identification and management of hearing loss.¹ Corrected hearing loss fosters participation in conversations & social engagement, reduces the cognitive load of processing degraded sound, and provides increased brain stimulation.

References:

¹ World Health Organization. (2021). World report on hearing. Geneva: World Health Organization. Retrieved March 8th, 2021. from <https://www.who.int/publications/i/item/world-report-on-hearing>. ² Livingston, G., Huntley, J., Sommerlad, A., Ames, D., Ballard, C., Banerjee, S., ... Mukadam, N. (2020). Dementia prevention, intervention, and care: 2020 report of the Lancet Commission. *Lancet* (London, England), 396(10248), 413-446. doi:10.1016/S0140-6736(20)30367-6. ³ Institute for Health Metrics and Evaluation (IHME). (2018). Findings from the Global Burden of Disease Study 2017. Seattle, WA: IHME. http://www.healthdata.org/sites/default/files/files/policy_report/2019/GBD_2017_Booklet.pdf. ⁴ Lin, Frank R et al. (2023). 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. *The Lancet*. [https://doi.org/10.1016/S0140-6736\(23\)01406-X](https://doi.org/10.1016/S0140-6736(23)01406-X). ⁵ Sarant, J., et al. (2023 July 16-20). Cognitive Function in Older Adults with Hearing Loss: Outcomes for treated vs untreated groups at 3-year follow-up [Conference poster]. AAIC 2023 Conference, Amsterdam, Netherlands. ⁶ Jiang, F., Mishra, S.R., Shrestha, N., Ozaki, A., Virani, S.S., Bright, T. et al., (2023). Association between hearing aid use and all-cause and cause-specific dementia: an analysis of the UK Biobank cohort. *The Lancet Public Health*. doi: 10.1016/S2468-2667(23)00048-8. ⁷ Chadha, S., Kamenov, K., & Cieza, A. (2021). The world report on hearing, 2021. *Bull World Health Organ*, 99(4), 242. ⁸ Lin, F. R., Metter, E. J., O'Brien, R. J., Resnick, S. M., Zonderman, A. B., & Ferrucci, L. (2011). Hearing loss and incident dementia. *Archives of neurology*, 68, 214-220. doi:10.1001/archneurol.2010.362