

Hearing aids may cut risk of cognitive decline by nearly half

A large study showed that older adults with a higher risk of dementia may be able to reduce their risk of cognitive decline by almost 50 percent by using hearing aids

By [Lindsey Bever](#) July 19, 2023 WashPost

Older adults at greater risk for dementia may be able to protect themselves against cognitive decline by using hearing aids, new research shows.

A [study](#) published Monday in the *Lancet* found that the [use of hearing aids](#) can reduce the risk of cognitive decline by about half — 48 percent — for adults with more risk factors for dementia, such as elevated blood pressure, higher rates of diabetes, lower education and income, and those living alone. The study was presented at the Alzheimer’s Association International Conference in Amsterdam. “It came as a surprise in a good way, seeing that hearing intervention had such a large effect on reducing cognitive decline,” said [Frank Lin](#), professor at Johns Hopkins University School of Medicine and Bloomberg School of Public Health, who was lead author of the study. “It really draws attention to the fact that hearing is really important. And, in many cases, people don’t realize whether or not they have hearing loss, so clearly a first step is getting your hearing checked if you don’t know where your [hearing level](#) is.”

Hearing loss is common worldwide, but is often untreated, especially in lower- and middle-income countries. Nearly 2.5 billion people are expected to have some hearing loss, and at least 700 million people will require help with their hearing by 2050, according to the [World Health Organization](#).

Age-related hearing loss nearly doubles the risk for dementia, a [2020 report in Lancet](#) showed, accounting for more than 8 percent of all dementia cases — 800,000 of the nearly 10 million new cases of dementia diagnosed every year. Hearing treatment, though, is now more accessible, as [hearing aids are available](#) over-the-counter in the United States.

Over a three-year period, the randomized controlled [trial](#) studied nearly 1,000 older adults, ages 70 to 84, in four sites in the United States. The participants included older adults in an ongoing study of cardiovascular health — Atherosclerosis Risk in Communities (ARIC) — and others who were healthier than the ARIC adults; both groups were from the same communities at each site.

When the two groups were combined, use of hearing aids was shown to have no significant effect on slowing cognitive changes. When the group at higher risk of dementia, the ARIC group, was analyzed separately, however, researchers found that hearing intervention — counseling with an audiologist and use of hearing aids

— had a significant impact on reducing cognitive decline. Those considered at high risk for dementia were older and had lower cognitive scores, among other factors.

When the groups were combined, the slower rate of cognitive decline experienced by the healthier participants may have limited any effect of hearing aids, the researchers suggested.

Whether hearing treatment reduces the risk of developing dementia in the long term is still unknown. “That’s the next big question — and something we can’t answer yet,” said Lin, who is also director of the Cochlear Center for Hearing and Public Health at Johns Hopkins University. He said he and his colleagues are planning a long-term follow-up study to attempt to answer that question.

There have many studies over the past decade to try to determine why people with hearing loss tend to have worse cognition, said [Justin S. Golub](#), an associate professor of otolaryngology at Columbia University Irving Medical Center. One theory is that it requires a lot of effort for people with hearing loss to understand what others are saying — and that necessary brainpower leaves fewer cognitive resources to process the meaning of what was heard, he said.

Another theory relates to brain structure. Research has shown that the temporal lobe of people with hearing loss tends to shrink quicker because it is not receiving as much auditory input from the inner ear. The temporal lobe is connected to other parts of the brain, and “that could have cascading influences on brain structure and function,” said Golub, who was not part of the Lancet study.

A third theory is that people with hearing loss tend to be less social and, as a result, have less cognitive stimulation, he said.

There have been smaller clinical trials attempting to show that people who wear hearing aids tend to have better cognition, but there has never been a large-scale study looking at the long-term cognitive effects of wearing a hearing aid until now, Golub said.

“This is truly unique, truly groundbreaking,” he said.