

Even Mild or Slight Levels of Hearing Loss Linked to Mental Decline in Seniors

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Slight declines in hearing, smaller than the usual cutoff for diagnosing hearing loss, are associated with measurable mental decline in seniors, a new study suggests.

When researchers used a stricter threshold to include mild hearing loss, they found evidence that the well-established link between age-related hearing loss and cognitive decline might begin sooner than is recognized, according to the [report in JAMA Otolaryngology-Head & Neck Surgery](#).

The seniors who had hearing problems at the more sensitive threshold would have been considered to have normal hearing by the current standard for diagnosing hearing loss: 25 decibels, the researchers note. But when the threshold was set at a hearing decline of just 15 decibels, which is comparable to the volume of a whisper or rustling leaves, some of the seniors had trouble hearing.

These people also had “clinically meaningful” cognitive decline, the study team found.

Some scientists suspect that hearing issues might lead to thinking problems because the brain has to redirect so much attention to hearing that it doesn't get to exercise other mental functions as much.

“People with worse hearing use so much more brain-power to decode the words that are said, they don’t get to process the meaning of what was said, which is the intellectually stimulating part”

–Dr. Justin Golub, lead study author

Golub compares brain fitness to physical fitness. If runners had to think about how to take each step, they wouldn’t get very fast, he explained. Similarly, parts of the brain involved in complex thinking don’t get as much “exercise” when more resources are directed to decoding the words in a conversation.

Beyond that, it’s been shown that “people with worse hearing socialize less – because it’s hard – and thus have fewer intellectually stimulating conversations,” Golub said. “The brain is like a tool that has to be maintained.”

Hearing Loss and Mental Decline

For the new study, Golub and his colleagues analyzed information from the Hispanic Community Health Study (HCHS) and the National Health and Nutrition Study (NHANES), both of which contained data on participants who were given both hearing and cognitive testing.

The researchers focused on participants in the HCHS who were aged 50 or older and who had not developed early-onset hearing loss and

those in the NHANES who were aged 60 to 69. That gave them a total of 6,451 people in the analysis, with an average age of just over 59 years.

After accounting for demographic and cardiovascular risk factors – both of which might impact the likelihood of developing cognitive problems – the researchers determined that decreased hearing ability was associated with worse performance on the cognitive tests.

According to comments from Golub to [Reuters](#):

“People who had difficulty hearing a whisper (but technically still had normal hearing), scored 6 points worse on a test of speed and attention than people who had absolutely perfect hearing. This took into account other factors, such as age. Scientists say that the 6-point change could make a meaningful difference in day to day function.”

The study wasn't designed to examine how hearing loss might directly influence cognitive decline, the researchers acknowledge.

Could Hearing Aid Use Help the Brain?

Golub and other researchers suspect that people might be able to remain more mentally sharp if they started wearing hearing aids as soon as they started to have even mild issues with hearing.

“We’re running a randomized controlled trial right now treating one group of people with hearing loss and comparing them to a group with no treatment. We’ll see if in a couple of years the people with hearing aids are cognitively sharper.”

–Dr. Justin Golub, lead study author

Golub and his colleagues looked at something other researchers haven’t considered: the possible impact of mild hearing loss on cognition, said Dr. Maura Cosetti, an associate professor at the Icahn School of Medicine and director of the Cochlear Implant Center at New York Eye and Ear Infirmary of Mount Sinai in New York City.

Lately, Cosetti said, researchers increasingly have been wondering “if we treat hearing loss can we improve cognition or at least stabilize the rate of decline. It seems like the answer is yes, but it’s too early to tell.”

Unfortunately, many people who have developed hearing problems are unwilling to use a hearing aid, Cosetti said. “It’s something ingrained in our culture,” she added.

Source: *Reuters, JAMA Otolaryngology*

