

# Hearing aid use is associated with improved cognitive function in hearing-impaired elderly

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A study conducted by researchers at Columbia University Medical Center (CUMC) found that older adults who used a hearing aid performed significantly better on cognitive tests than those who did not use a hearing aid, despite having poorer hearing. The study was published online in the *American Journal of Geriatric Psychiatry*.

The researchers also found that cognitive function was directly related to hearing ability in participants who did not use a hearing aid.

More than half of [adults](#) over age 75 have hearing loss, yet less than 15 percent of the hearing impaired use a hearing aid device. Previous studies have shown that the hearing-impaired elderly have a higher incidence of fall- and accident-related death, social isolation, and dementia than those without hearing loss. Studies have also demonstrated that hearing aid use can improve the social, functional, and emotional consequences of hearing loss.

"We know that [hearing aids](#) can keep [older adults](#) with hearing loss more socially engaged by providing an important bridge to the outside world," said Anil K. Lalwani, MD, professor of otolaryngology/head and neck surgery at CUMC and otolaryngologist at NewYork-Presbyterian/CUMC and NewYork-Presbyterian/Morgan Stanley Children's Hospital. "In this study, we wanted to determine if they could also slow the effects of aging on cognitive function."

The study included 100 adults with hearing loss between the ages of 80 and 99. Of the participants, 34 regularly used a hearing aid. Audiometry tests were performed to measure the degree of hearing loss. Cognitive function was evaluated by the Mini-Mental State Examination (MMSE), in which participants give vocal responses to verbal commands. Executive function was also assessed with the Trail Making Test, Part B (TMT-B), which does not have a verbal or auditory component.

Hearing aid users, who had worse hearing than non-users, performed significantly (1.9 points) better on the MMSE. Among non-users, participants with more hearing loss also had lower MMSE scores than those with better hearing. Although hearing aid users performed better than non-users on the TMT-B, the difference was not statistically significant. In addition, TMT-B scores were not correlated with hearing level.

"Our study suggests that using a [hearing](#) aid may offer a simple, yet important, way to prevent or slow the development of dementia by keeping adults with [hearing loss](#) engaged in conversation and communication," said Dr. Lalwani.

The study is titled, "Hearing Aid Use Is Associated with Better Mini-Mental State Exam Performance." The other contributors are: Z. Jason Qian, MS, Kapil Wattamwar, BS, Francesco F. Caruana, Jenna Otter, MD, Matthew J. Leskowitz, MD, Barbara Siedlecki, MS, RN, and Jaclyn B. Spitzer, PhD.

**More information:** Z. Jason Qian et al, Hearing Aid Use is Associated with Better Mini-Mental State Exam Performance, *The American Journal of Geriatric Psychiatry* (2016). [DOI: 10.1016/j.jagp.2016.03.005](https://doi.org/10.1016/j.jagp.2016.03.005)

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