Link Between Hearing Loss and Dementia

Researchers at Johns Hopkins and National Institute of Aging have published a study suggesting a link between hearing loss and dementia. Their findings offer new perspectives on various treatments and interventions— even the use of hearing aids— for the prevention or delay of dementia.

The study was published in the Archives of Neurology, using data from the Baltimore Longitudinal Study on Aging (BLSA). The BLSA data followed various health factors in thousands of men and women over decades. The current researchers used the data of over 600 people whose hearing and cognitive abilities were tested between 1990 and 1994. None of the participants had dementia at the start of the study and about a quarter had some degree of hearing loss. The results were further adjusted for age, sex, race, education, diabetes mellitus, smoking, and hypertension.

The participants were then followed every one to two years for the development of dementia through May, 2008. By the end of the study, 58 of them had developed dementia. Interestingly, the researchers found that those people with hearing loss were more likely to develop dementia. Further, the risk for developing dementia increased with the severity of the hearing loss. In other words, the greater the hearing loss the greater the risk of developing dementia.

The reason for this link remains unclear, but the researchers have some ideas. One thought is that hearing loss may be related to dementia through exhaustion of cognitive reserve. When a hearing loss is present, it takes more cognition to process sound at the detriment of other processes such as memory. And hearing loss can also lead to social isolation which is already a known risk factor for dementia. While the researchers caution that further study into this link is necessary, it certainly offers cause to treat a hearing loss as early as possible. “A lot of people ignore hearing loss because it’s such a slow and insidious process as we age... even if people feel as if they are not affected, we’re showing that it may well be a more serious problem,” say the study leader Frank Lin, M.D., Ph.D. of Johns Hopkins.

Heart Disease and Hearing Loss

By Terry DeGroot, M.D.

The American Heart Association lists heart disease as our nation’s number one killer. According to the Better Hearing Institute, 25% of adults in the U.S. demonstrate some level of hearing loss. A physical link between heart disease and hearing loss has long been suggested and in a 2010 issue of The American Journal of Audiology, Raymond H. Hall and Stacy R. Keisseken reviewed 60 years of research on that subject. Results showed a negative influence of impaired cardiovascular health on both the peripheral and central auditory system as well as the potential positive influence of improved cardiovascular health on the same system.

Without getting into the intricacies of the auditory system or "heart disease", it has been noted that any condition that diminishes blood supply and oxygen flow to the hearing structures can impair optimal function of the auditory system. The study found that adults between 65 and 85 years of age with cardiovascular disease or other peripheral vascular circulation disorders had measurably poorer hearing thresholds than people in the same age group without heart and vascular disorders.

People with heart disease have been shown, in one study, to be eight times more likely to demonstrate hearing loss. This same study also indicated that hearing loss can be an early indicator of heart and circulatory disease. Persistent high blood pressure has also been correlated with hearing loss. The good news is that improved cardiovascular fitness to even a small degree seems to improve central (brain) auditory processing and understanding.

In conclusion, cardiovascular health and hearing appear closely linked. Routine hearing evaluation could be an important aspect of one’s physical examination, similar to vision testing.

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