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Diabetic patients have higher prevalence of hearing impairment

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Patients with diabetes have a significantly higher prevalence of hearing impairment than patients without diabetes, according to a recent study accepted for publication in The Endocrine Society's *Journal of Clinical Endocrinology & Metabolism* (*JCEM*). Study authors note that the finding is likely to be independent of the effect of aging or a noisy environment.

The number of those with impaired hearing more than doubled in the period from 1995 to 2004. Epidemiologically, several health problems in relation to hearing impairment have been reported such as depression and dementia. Recently several studies have investigated the relationship between diabetes and hearing impairment but their findings were inconsistent.

"The association of hearing impairment with diabetes is controversial, but it is believed that over time, high blood glucose levels can damage vessels in the stria vascularis and nerves diminishing the ability to hear," said Chika Horikawa, RD, MSc, of Niigata University in Japan and lead author of the study. "In our study we found that persons with diabetes had more than two times higher prevalence of hearing impairment than those without diabetes."

This study was a meta-analysis of thirteen previous cross-sectional studies (20,194 participants). Hearing impairment was assessed by pure-tone audiometry that included at least 2 kHz of frequency range. The strength of the association between diabetes and prevalence of hearing impairment was not significantly influenced by whether participants

were matched for age and gender or whether participants chronically exposed to noisy environments were excluded.

"Our results propose that diabetic patients be screened for hearing impairment from earlier age compared with non-diabetics, from the viewpoint of prevention of several health problems such as depression and dementia caused by hearing impairment," notes Horikawa.

More information: The article, "Diabetes and Risk of Hearing Impairment in Adults: A Meta-analysis," appears in the January 2013 issue of *JCEM*.

Provided by The Endocrine Society

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