

Factors associated with age-related hearing loss differ between males and females, finds study

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The study suggests that factors associated with age-related hearing loss differ between males and females. Credit: Mark Paton, Unsplash, CC0 (creativecommons.org/publicdomain/zero/1.0/)

Certain factors associated with developing age-related hearing loss differ

by sex, including weight, smoking behavior, and hormone exposure, according to a study published in the open-access journal *PLOS ONE* by Dong Woo Nam from Chungbuk National University Hospital, South Korea, and colleagues.

Age-related hearing loss (ARHL), slowly advancing difficulty in hearing high-frequency sounds, makes spoken communication more challenging, often leading to loneliness and depression.

Roughly 1 in 5 people around the world suffer from hearing loss, and this number is expected to rise as the global population ages. Since ARHL is irreversible, identifying it early and taking [preventative measures](#) are especially important.

To better understand the factors associated with ARHL, and how the relative influence of these factors is shaped by sex, the researchers analyzed check-up health examination data from 2,349 participants aged over 60. After gathering each participant's medical history and performing blood tests, a body composition test, and a basic hearing test, they ran [statistical analyses](#) to identify factors most strongly associated with ARHL risk for males and females.

The researchers found that while some factors—such as age—were associated with ARHL regardless of gender, others were differently associated with ARHL risk in males and females. For example, while being underweight showed a significant association with ARHL in males, both low weight and obesity showed significant associations in females.

Smoking was associated with increased ARHL risk in males only, who were far more likely than [females](#) to identify as smokers in this sample population. Females who started menstruating at an earlier age were less likely to develop ARHL later in life, pointing towards a possible

protective effect of the hormone estrogen.

This study does not allow elucidation of causal relationships between these factors and hearing loss, and further experimental studies will be necessary to confirm and better interpret these findings. However, the authors propose that assessing and counseling patients about their smoking behavior, weight, and menstruation may help improve screening and preventative treatment for ARHL.

More information: Sex differences in associated factors for age-related hearing loss, *PLoS ONE* (2024). [DOI: 10.1371/journal.pone.0298048](https://doi.org/10.1371/journal.pone.0298048)

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