

# Passive smokers at increased risk of hearing loss

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Non-smokers who regularly breathe in others' tobacco smoke are at increased risk of some degree of hearing loss, reveals research published online in *Tobacco Control*.

Previous research indicates that former and current smokers are more likely to lose some of their full range of hearing, but it's not been known whether passive smokers are also prone to this.

The authors drew on 1999-2004 data from the National Health and Nutrition Examination Survey (NHANES), a yearly household survey combined with a physical examination of a representative sample of the US population.

In all, a total of 3307 adults aged between 20 and 69 were included in the final analysis. They had all had their hearing tested, and were classified as passive smokers according to levels of a constituent of [tobacco smoke](#) (cotinine) in their blood.

They were also able to provide information on their medical history, levels of noise exposure, and whether they had ever smoked or lived/worked with a smoker.

The degree of [hearing loss](#) in each ear was assessed by testing the ability to hear pure tones over a range of frequencies from 500 Hz (low) to 8000 Hz (high).

Men, those who were older, and those with diabetes were significantly more likely to have high frequency hearing loss. And this was true of those who were former smokers and those who had never smoked.

But even after taking account of these factors, both former and [passive smoking](#) were associated with impaired hearing.

Former smokers were significantly more likely to have impaired hearing. The prevalence of low to mid frequency hearing loss among this group was 14%. And almost half (over 46%) had high frequency hearing loss (more than 25 decibels).

Although the risk was not as strong among those who had never smoked, almost one in 10 (8.6%) had low to mid frequency hearing loss and one in four (26.6%) had high frequency hearing loss.

And the stronger findings among former smokers suggest that continued passive smoking in this group, even at low levels, could continue the progression of high frequency hearing loss that began when they were active smokers, say the authors.

"Further research is required to determine whether [passive smoking] potentiates the effect of noise exposure and ageing on hearing," they conclude. "If this finding is independently confirmed, then hearing loss can be added to the growing list of health consequences associated with exposure to secondhand tobacco smoke."

Provided by British Medical Journal

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