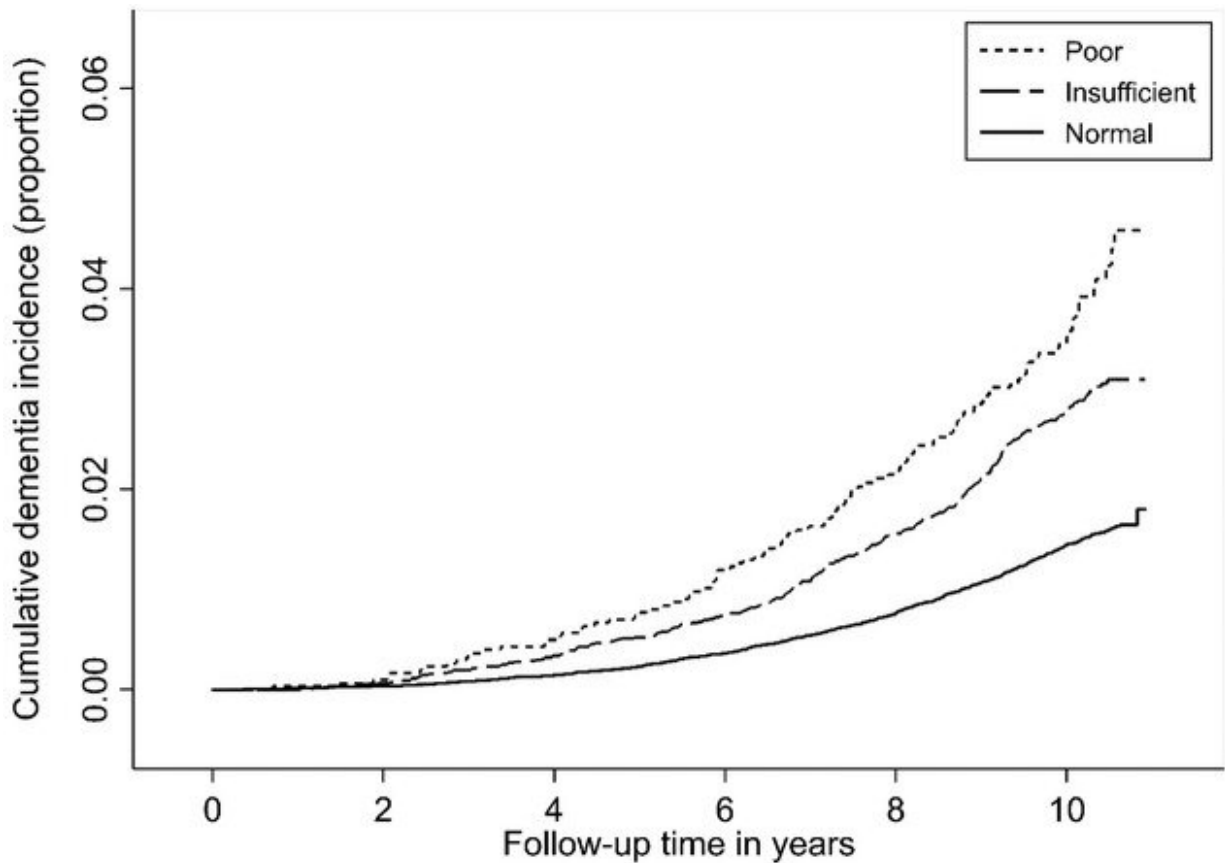


Difficulty hearing speech could be a risk factor for dementia

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Cumulative unadjusted dementia incidence by speech-in-noise (SiN) hearing status. Credit: DOI: 10.1002/alz.12416

In 2020 a landmark report by The Lancet Commission estimated that

people with unaddressed midlife hearing loss are up to five times more likely to be affected by dementia than those without hearing loss.

Most previous studies have focused on our ability to detect sounds and we tend to think of [hearing problems](#) as sounds seeming quieter and less likely to be noticed. But the ears are instruments that pick up [sound waves](#) and send out nerve impulses, while our brains interpret these signals.

Today (Wednesday 21st July) a study conducted at the University of Oxford investigated the 'cocktail party problem.' The results are published in the scientific paper, *Alzheimer's & Dementia*.

What is the cocktail party problem?

The cocktail party problem is the challenge people have focusing on a single speaker or conversation in a noisy environment. For example, most people talking to a friend at a bustling cocktail party are able to listen to and understand what they are talking about—and ignore what other people nearby are saying. This becomes increasingly difficult for many people with Alzheimer's disease.

What did the study show?

Scientists studied over 82,000 women and men aged 60 years or older from a large ongoing [dementia](#) study known as the UK Biobank. At the beginning of the study, participants attempted to identify spoken numbers against a background of white noise. Scientists then grouped the volunteers into three groups based on their performance in this task.

The scientists identified 11,285 participants who went on to develop dementia in an 11 year period after the test. They found that the

volunteers who were poorly or insufficiently able to distinguish spoken numbers from a background of white noise had an increased risk of developing dementia.

Dr. Katy Stubbs from Alzheimer's Research UK, said: "While most people think of memory problems when we hear the word dementia, this is far from the whole story. Many people with dementia will experience difficulty following speech in a noisy environment—a symptom sometimes called the 'cocktail party problem.'" This study suggests that these hearing changes may not just be a symptom of dementia, but a risk factor that could potentially be treated. Large studies like the UK Biobank are powerful tools for identifying genetic, health and lifestyle factors linked to conditions like dementia, but it is always difficult to tease apart cause and effect in this type of research. Anyone who has concerns about their [hearing](#) should speak to their GP."

More information: Jonathan S. Stevenson et al, Speech-in-noise hearing impairment is associated with an increased risk of incident dementia in 82,039 UK Biobank participants, *Alzheimer's & Dementia* (2021). [DOI: 10.1002/alz.12416](https://doi.org/10.1002/alz.12416)

Provided by Alzheimer's Research UK

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