Turn an ear to hear

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*Listeners in a noisy situation benefit from facing slightly away from the person they are listening to, turning one ear towards the speech, concludes a study by Cardiff University, funded by UK charity Action on Hearing Loss (RNID).*

This listening tactic was found to be especially beneficial for cochlear implant users who typically struggle in noisy social settings such as restaurants.

It was also found to be compatible with lip reading which was unaffected by a modest, 30-degree head orientation, illustrating that the benefits of lip-reading and turning an ear towards a talker can be combined.

Dr Jacques Grange from Cardiff University’s School of Psychology said: “Noise can be a big issue for any listener and especially for someone with a cochlear implant..."

“It’s better to have a clear signal in one ear than a mediocre signal in both.”

When tested in the laboratory, with the speech in front of the listener and interfering noise behind, the technique resulted in a 4-decibel improvement to intelligibility of speech in a noisy environment for both normal-hearing listeners and cochlear implant users. A 4-decibel improvement can be the difference between understanding nothing and perfect understanding.

Dr Ralph Holme, Head of Biomedical Research at Action on Hearing Loss said: “We are also campaigning for bars, restaurants and cafes to do more to improve their acoustics to make it easier for people with a hearing loss to engage in conversation.”

To simulate a realistic restaurant listening situation, acoustic measurements were also taken in the Mezza Luna restaurant in Cardiff and used to create a virtual acoustic simulation. In the simulation normally hearing listeners were tested at each table with three different head orientations: facing the target talker, with a 30-degree head turn to the left, or with a 30-degree head turn to the right.

The data showed that a significant head-orientation benefit still occurred with this high level of realism.

The two experiments allow for conclusions to be made about the causal effect of head turning on the understanding of speech in both a laboratory and a real-world setting.