

Sign language users have better reaction times and peripheral vision

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People who use British Sign Language (BSL) have better reaction times in their peripheral vision, a new study from the University of Sheffield has found.

The findings, revealed by scientists from the University's Academic Unit of Ophthalmology and Orthoptics, show that hearing adults learning a visual-spatial language such as BSL has a positive impact on visual field response – something which is highly beneficial in many sports and when driving.

Dr Charlotte Codina, lead author of the study and Lecturer in Orthoptics at the University of Sheffield, said: "We were surprised by the quicker response times of BSL interpreters, who haven't necessarily known sign language since childhood, but have improved their peripheral visual sensitivity in learning this visual language and using it daily.

"This shows that becoming a BSL interpreter is not only an interesting job, but it also has benefits such as making you more alert to changes in your peripheral field that could help when driving, playing sport or refereeing a football match for example."

The pioneering research also found deaf adults have significantly better peripheral vision and reaction times than both hearing adults and BSL users, providing scientific evidence to support the common belief that losing one of your five senses, such as hearing, can enhance others like sight or smell.

"We found that deaf adults have faster [reaction times](#) around the whole of the visual field, extending as far as 85 degrees peripherally near the edge of vision," said Dr Codina.

"Our study shows that deaf people have exceptional visual abilities that hearing adults do not.

"These findings support the common belief in sensory compensation."

BSL is the most common form of [sign language](#) in the UK and is used by around 145,000 people. It has its own grammatical structure and syntax and as a language it is not dependent nor is it strongly related to spoken English.

Results of the study are published today (Monday 6 February 2017) in the journal *Frontiers in Psychology*.

More information: Charlotte J. Codina et al. Peripheral Visual Reaction Time Is Faster in Deaf Adults and British Sign Language Interpreters than in Hearing Adults, *Frontiers in Psychology* (2017). [DOI: 10.3389/fpsyg.2017.00050](#)

Provided by University of Sheffield

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