

# Speaking multiple languages linked to better cognitive functions after stroke

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Micrograph showing cortical pseudolaminar necrosis, a finding seen in strokes on medical imaging and at autopsy. H&E-LFB stain. Credit: Nephron/Wikipedia

Bilingual patients were twice as likely as those who spoke one language to have normal cognitive functions after a stroke, in a study reported in the American Heart Association journal *Stroke*.

Previous research found bilingualism may delay the onset of Alzheimer's

disease.

"People tend to think of Alzheimer's as the only cause of dementia, but they need to know that stroke is also an important cause," said Subhash Kaul, D.M., senior investigator and developer of the stroke registry at Nizam's Institute of Medical Sciences (NIMS) in Hyderabad, India.

In the new study, researchers reviewed the records of 608 patients in the NIMS stroke registry in 2006-13. More than half the patients were bilingual, defined in the study as speaking two or more languages. To ensure results weren't due to bilinguals having a healthier lifestyle, researchers took into account other factors such as smoking, [high blood pressure](#), diabetes and age. They found:

About 40 percent of bilingual patients had normal cognitive functions following a stroke, compared to about 20 percent of single [language](#) patients.

Bilinguals performed better on post-stroke tests that measured attention, and ability to retrieve and organize information.

Surprisingly, there was no difference between bilinguals and those who spoke one language in the likelihood of experiencing aphasia, a disorder that can cause difficulties in speaking, reading and writing, after a stroke.

"The advantage of bilingualism is that it makes people switch from one language to another, so while they inhibit one language, they have to activate another to communicate," said Suvarna Alladi, D.M., lead author and a neurology professor at NIMS.

"The combined vocabulary of [bilinguals](#) can make it more difficult for them to find specific words. This may explain what appears to be a

surprising result," said Thomas Bak, M.D., study co-author at the University of Edinburgh in United Kingdom.

The study's results may not be universally applicable to all bilingual people. Hyderabad is a multicultural city in which many languages are commonly spoken, including Telugu, Urdu, Hindi and English.

"Constantly switching languages is a daily reality for many residents of Hyderabad," Alladi said. "The cognitive benefit may not be seen in places where the need to function in two or more languages isn't as extensive."

People who speak only one language shouldn't necessarily begin learning another one, Kaul said. "Our study suggests that intellectually stimulating activities pursued over time, from a young age or even starting in mid-life, can protect you from the damage brought on by a stroke."

On average, someone in the United States has a [stroke](#) every 40 seconds, according to the American Heart Association's 2015 Statistical Update.

Provided by American Heart Association

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