

Learning a second language protects against Alzheimer's

Bilingual Alzheimer's patients cope better with the disease since their brains are more active in general.

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WASHINGTON, D.C. — Want to protect against the effects of Alzheimer's? Learn another language. That's the takeaway from recent brain research, which shows that [bilingual people's brains](#) function better and for longer after developing the disease.

Psychologist Ellen Bialystok and her colleagues at York University in Toronto recently tested about 450 patients who had been diagnosed with [Alzheimer's](#). Half of these patients were bilingual, and half spoke only one language.

While all the patients had similar levels of cognitive impairment, the researchers found that those who were bilingual had been diagnosed with Alzheimer's about four years later, on average, than those who spoke just one language. And the bilingual people reported their symptoms had begun about five years later than those who spoke only one language.

"What we've been able to show is that in these patients... all of whom have been diagnosed with Alzheimer's and are all at the same level of impairment, the bilinguals on average are four to five years older — which means that they've been able to cope with the disease," Bialystok said.

She presented her findings on Feb. 18 at the annual meeting of the American Association for the Advancement of Science. Some results of this research were published in the Nov. 9, 2010 issue of the journal *Neurology*.

CT brain scans of the Alzheimer's patients showed that, among patients who are functioning at the same level, those who are bilingual have more advanced brain deterioration than those who spoke just one language. But this difference wasn't apparent from the patients' behaviors, or their abilities to function. The bilingual people acted like monolingual patients whose disease was less advanced.

"Once the disease begins to compromise this region of the brain, bilinguals can continue to function," Bialystok said. "Bilingualism is protecting older adults, even after Alzheimer's disease is beginning to affect cognitive function."

The researchers think this protection stems from brain differences between those speak one language and [those who speak more than one](#). In particular, studies show bilingual people exercise a brain network called the executive control system more. The executive control system involves parts of the prefrontal cortex and other brain areas, and is the basis of our ability to think in complex ways, Bialystok said.

"It's the most important part of your mind," she said. "It controls attention and everything we think of as uniquely human thought."

Bilingual people, the theory goes, constantly have to exercise this brain system to prevent their two languages from interfering with one another. Their brains must sort through multiple options for each word, switch back and forth between the two languages, and keep everything straight.

And all this work seems to confer a cognitive benefit — an ability to cope when the going gets tough and the brain is besieged with a [disease such as Alzheimer's](#).

"It's not that being bilingual prevents the disease," Bialystok told MyHealthNewsDaily. Instead, she explained, it allows those who develop Alzheimer's to deal with it better.

Moreover, other research suggests that these benefits of bilingualism apply not only to those who are raised from birth speaking a second language, but also to people who take up a foreign tongue later in life.

"The evidence that we have is not only with very early bilinguals," said psychologist Teresa Bajo of the University of Granada in Spain, who was not involved in Bialystok's research. "Even late bilinguals use these very same processes so they may have also the very same advantages."

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