

Can learning a new language stave off dementia?

Bilingual people display some cognitive benefits later in life, science shows

BY DANA G. SMITH

My father decided to start learning French when he was 57. He hired a tutor to meet with him twice a week and diligently completed his homework before every lesson. Before long, he was visiting the French bakery across town to practice his pronunciation (and buy macarons). Now, 20 years later, he's on his third tutor.

On the surface, his retirement hobby seems a little random — our family has no connection to French-speaking countries — but his motivation ran deeper than a passion for pastries. My grandmother developed signs of Alzheimer's disease in her early 70s, and studies suggest that being bilingual can delay the onset of the condition by up to five years.

Drawn by that potential benefit, many people, like my father, have attempted to pick up a new language in adulthood. According to a survey by the language learning app Memrise, 57 percent of users reported "boost brain health" as a motivation for using the program.

But is that really possible? The studies on bilingualism and dementia were conducted in people who have used multiple languages in their daily life since at least early adulthood. Whether casually learning another language later on confers the same cognitive advantages is up for debate.

BENEFITS FOR THE AGING BRAIN

Lots of activities are linked to better brain health in old age, like getting more education when you're younger, physi-

cal activity and cognitively stimulating hobbies.

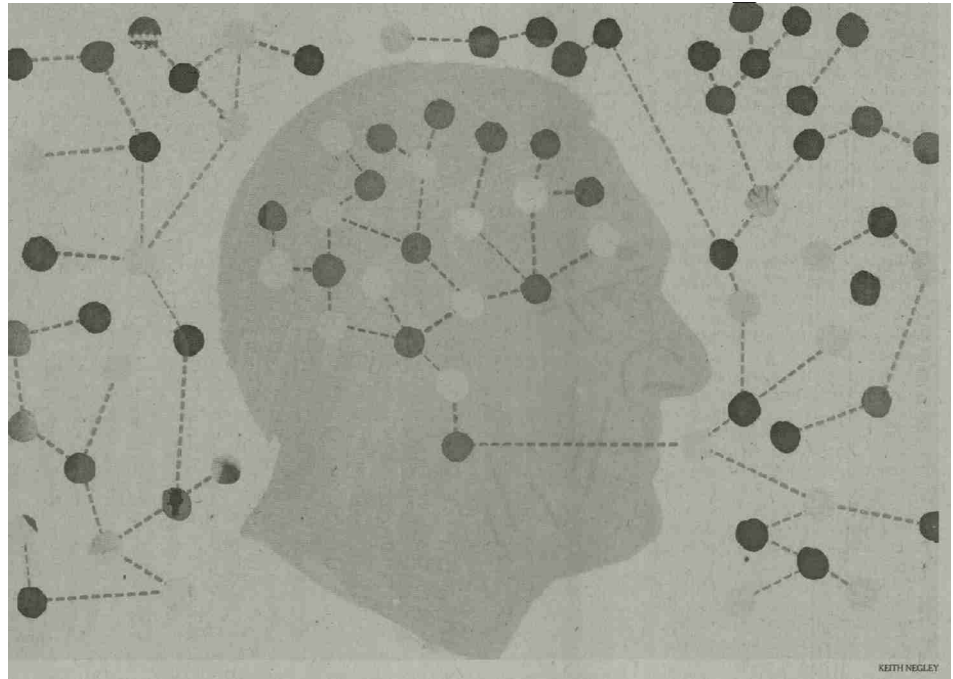
Experts say regularly speaking multiple languages may be especially beneficial, though.

"We use language in all aspects of daily life, so a bilingual brain is constantly working," said Mark Antoniou, an associate professor at Western Syd-

ney University in Australia who specializes in bilingualism.

"You don't really get that from other enriching experiences, like playing a musical instrument."

The age at which you learn another language appears to be less important



KEITH NEBLEY

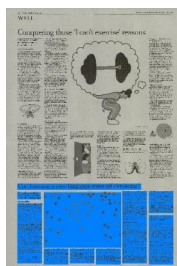
than how often you speak it, said Caitlin Ware, a research engineer at Broca Hospital in Paris who studies bilingualism and brain health. "The cognitive benefit is from having to inhibit your mother tongue," she said, which your brain is forced to do if you're trying to recall the right words in another language. "So if the second language is used a lot, you're getting that cognitive training."

That process — called cognitive inhibition — is linked to better executive functioning. In theory, by improving these types of processes, the brain becomes more resilient to the impair-

ments caused by diseases like dementia — a concept known as cognitive reserve. The stronger your mental faculties, the thinking goes, the longer you can function normally, even if your brain health starts to decline.

In a landmark 2007 paper, researchers from Toronto found that among people with dementia, those who were bilingual developed symptoms four years later, on average, than those who weren't. Several studies published since then have reported similar findings, though other research has found no such difference.

LATER-LIFE LEARNING



Evidence for the benefits of learning a second language as a hobby in your 60s is weaker.

Research by Dr. Antoniou and colleagues found that although Chinese adults 60 and older improved on cognition tests after a six-month language-learning program, people who played games like Sudoku and crossword puzzles did as well. Another small study found that the cognition scores of older Italians who took English lessons for four months didn't rise, but the scores of people who didn't take the lessons declined.

Two more recent studies on the topic, published in 2023, found virtually no difference in cognitive performance after people took part in language-learning programs.

The scientists who conducted those studies offered a few potential explanations for their disappointing results. One is that the participants were highly motivated volunteers, who may have already been at peak performance for their age, making it hard to see any improvements.

"When we recruit participants, we have to be careful, are they really representative of the population?" said Dr. Ware, who helped run one of the experiments. "And is their cognitive level maybe a little too high?"

Another is that the language interventions were perhaps too short. The handful of studies looking into the issue have used language lessons that "were very different in their length and fre-

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quency," said Judith Grossman, who researched the topic as part of her doctorate at Heidelberg University in Germany. Some studies taught participants for eight months, others for just one very intense week.

To Dr. Antoniou, the limited findings are not entirely surprising. No one would say that learning a new language for six months "would be the same as having used two languages for your entire life," he said.

But he does think that language lessons can provide cognitive benefits by being intellectually stimulating.

Perhaps more important, Ms. Grossman said, learning another language offers other potential advantages, like traveling or connecting with new communities. My father, for example, has re-

mained pen pals with his first tutor after she moved back to Paris, and he's traveled to France (and French-speaking parts of Canada) numerous times.

And at 76, he's as sharp as ever.