

Bilingualism Linked To Improved Cognition

The Skill That Boosts Brain Power

Do you have this ability?

By Katie Drummond

Parlez-vous francais? If you're well-versed in this language of love, or any other foreign tongue, then take note: The ability to speak a second language may prime your brain to stay sharper as you age.

Individuals who've spent several years speaking two languages on a daily basis are speedier when switching between tasks than their monolingual peers, finds new research published in *The Journal of Neuroscience*. As part of a series of experiments, investigators at the University of Kentucky College of Medicine used fMRI scans to reach that conclusion: They compared the brain activity of healthy study participants (aged 60-68) who were asked to complete a task evaluating cognitive flexibility. Bilingual participants were faster at completing the task, and demonstrated a smaller expenditure of energy in the brain's frontal cortexâ€″a region responsible for task swapping and short-term memory, among other abilities.

For another group of study participants who were several years younger, however, bilingualism didn't appear to instill any benefit. The finding suggests that it isn't just about knowing a second language. Rather, using that language over a long span of time appears to be key for a sharper mind.

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Earlier research has already suggested that cognitive engagement, such as that conferred by mastering two languages, appears to bolster brain ability as we age. This study, however, goes one step further: By using brain scans, experts were able to demonstrate not only the validity of the hypothesis, but exactly how cognitive engagement changes the brain.

"This is a stepping stone to answering the question of what's causing brain differences between older adults," says John L. Woodard, PhD, a professor of psychology and an aging expert at Wayne State University. "Is it possible that these brain differences are particular to people who *choose* more stimulation, or does stimulation trigger changes?"

The research might also assist in the development of new drugs to treat cognitive decline or age -related dementia, Woodard says, by helping investigators understand exactly which brain regions are involved in these processes.

For now, however, the message from this study and others is increasingly clear: To keep your gray matter in good shape, you've gotta use it. "A huge amount of research shows that activities to stimulate cognition are very valuable," Woodard says. "It doesn't need to be a second language. Play an instrument, join a choir, try creative writing, travel more often or visit more museums. All of these will help."

Several studies, including one recent investigation out of UCLA, also advise that physical activity can stave off dementia. In that study, people who burned more than 3,000 calories per week during the 20 year research span retained 5% more gray matter than their sedentary peers, which researchers described as a â€cetremendous†difference.

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