

Being bilingual wards off symptoms of dementia

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New research explains how speaking more than one language may translate to better mental health. A paper published by Cell Press in the March 29th issue of the journal *Trends in Cognitive Sciences* examines how being bilingual can offer protection from the symptoms of dementia, and also suggests that the increasing diversity in our world populations may have an unexpected positive impact on the resiliency of the adult brain.

"Previous studies have established that bilingualism has a beneficial effect on cognitive development in children," explains lead study author, Dr. Ellen Bialystok from York University. "In our paper, we reviewed recent studies using both behavioral and neuroimaging methods to examine the effects of bilingualism on cognition in adults."

Dr. Bialystok and colleagues discuss the intriguing finding that the need to monitor two languages in order to select the appropriate one recruits brain regions that are critical for general attention and cognitive control. Using these cognitive control networks for bilingual language processing may reconfigure and strengthen them, perhaps enhancing "mental flexibility", the ability to adapt to ongoing changes and process information efficiently.

Studies also suggest that bilingualism improves "cognitive reserve", the protective effect that stimulating mental or physical activity has on cognitive functioning in healthy aging. Cognitive reserve can also postpone the onset of symptoms in those suffering from dementia. This



is supported by studies showing that bilinguals experience onset symptoms of dementia years later than monolinguals.

"Our conclusion is that lifelong experience in managing attention to two languages reorganizes specific brain networks, creating a more effective basis for executive control and sustaining better <u>cognitive performance</u> throughout the lifespan," says Dr. Bialystok. "It should not be surprising that intense and sustained experience leaves its mark on our minds and brains, and it is now clear that the bilingual brain has been uniquely shaped by experience."

Provided by Cell Press

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