

# Purpose in life may protect against harmful changes in the brain associated with Alzheimer's disease

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Greater purpose in life may help stave off the harmful effects of plaques and tangles associated with Alzheimer's disease, according to a new study by researchers at Rush University Medical Center. The study, published in the May issue of the *Archives of General Psychiatry*, is available online.

"Our study showed that people who reported greater purpose in life exhibited better cognition than those with less purpose in life even as plaques and tangles accumulated in their brains," said Patricia A. Boyle, PhD.

"These findings suggest that purpose in life protects against the harmful effects of plaques and tangles on memory and other thinking abilities. This is encouraging and suggests that engaging in meaningful and purposeful activities promotes [cognitive health](#) in old age."

Boyle and her colleagues from the Rush Alzheimer's Disease Center studied 246 participants from the Rush Memory and Aging Project who did not have dementia and who subsequently died and underwent brain autopsy. Participants received an annual clinical evaluation for up to approximately 10 years, which included detailed cognitive testing and neurological exams.

Participants also answered questions about purpose in life, the degree to

which one derives meaning from life's experiences and is focused and intentional. [Brain plaques](#) and tangles were quantified after death. The authors then examined whether purpose in life slowed the rate of [cognitive decline](#) even as older persons accumulated plaques and tangles.

While plaques and tangles are very common among persons who develop Alzheimer's dementia (characterized by prominent [memory loss](#) and changes in other thinking abilities), recent data suggest that plaques and tangles accumulate in most older persons, even those without dementia. Plaques and tangles disrupt memory and other cognitive functions.

Boyle and colleagues note that much of the Alzheimer's research that is ongoing seeks to identify ways to prevent or limit the accumulation of plaques and tangles in the brain, a task that has proven quite difficult. Studies such as the current one are needed because, until effective preventive therapies are discovered, strategies that minimize the impact of plaques and tangles on cognition are urgently needed.

"These studies are challenging because many factors influence cognition and research studies often lack the brain specimen data needed to quantify Alzheimer's changes in the brain," Boyle said. "Identifying factors that promote cognitive health even as plaques and tangles accumulate will help combat the already large and rapidly increasing public health challenge posed by Alzheimer's disease."

**More information:** [www.archgenpsychiatry.com](http://www.archgenpsychiatry.com)

Provided by Rush University Medical Center

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