New study finds 6 ways to slow memory decline and lower dementia risk



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A new study of more than 29,000 older adults has identified six habits — from eating a variety of foods to regularly reading or playing cards — that are linked with a lower risk of dementia and a slower rate of memory decline.

Eating a balanced diet, exercising the mind and body regularly, having regular contact with others, and not drinking or smoking — these six "healthy lifestyle factors" were associated with better cognitive outcomes in older adults, in a large Chinese

study conducted over a decade and published in the BMJ on Wednesday.

While researchers have long known that there is a link between dementia and factors such as social isolation and obesity, the size and scope of the new study adds substantial evidence to a global body of research that suggests a healthy lifestyle may help brains age better. It also suggests that the effects of a healthy lifestyle are beneficial even for people who are genetically more susceptible to memory decline — a "very hope-giving" finding for the millions of individuals around the world who carry the APOEs4 gene, a major risk factor for Alzheimer's disease, said Eef Hogervorst, chair of biological psychology at Loughborough University, who was not involved in the study.

Memory naturally declines gradually as people age. Some older people may develop dementia, an umbrella term that can include Alzheimer's, and generally describes a deterioration in cognitive function that goes beyond the normal effects of aging. But for many, "memory loss can merely be senescent forgetfulness," write the authors of the BMJ study — like forgetting the name of that TV program you used to love, or that pesky fact you wanted to look up.

Memory loss is no less damaging for being gradual, and age-related memory decline can in some cases be an early symptom of dementia. But the good news, the researchers say, is that it "can be reversed or become stable rather than progress to a pathological state."

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The BMJ study was conducted in China between 2009 and 2019. Researchers conducted tests on over 29,000 people ages 60 and older and then tracked their progress or decline over time — what's known as a population-based cohort study. Although more than 10,500 participants dropped out of the study over the next decade — some participants died or stopped participating — the researchers still used the data collected from those individuals in their analysis.

At the start of the study, researchers conducted baseline memory tests as well as testing for the APOE gene. They also surveyed participants about their daily habits. Participants were sorted into one of three groups — favorable, average and unfavorable — based on their lifestyle.

The six modifiable lifestyle factors the researchers focused on included:

- Physical exercise: Doing at least 150 minutes of moderate or 75 minutes of vigorous activity per week.
- Diet: Eating appropriate daily amounts of at least seven of 12 food items (fruits, vegetables, fish, meat, dairy products, salt, oil, eggs, cereals, legumes, nuts and tea).
- Alcohol: Never drank or drank occasionally.
- Smoking: Never having smoked or being a former smoker.

- Cognitive activity: Exercising the brain at least twice a week (by reading and playing cards or mahjongg, for example).
- Social contact: Engaging with others at least twice a week (by attending community meetings or visiting friends or relatives, for example).

Over the course of the study, the researchers found that people in the favorable group (four to six healthy factors) and average group (two to three) had a slower rate of memory decline over time than people with unfavorable lifestyles (zero to one healthy factor). **People living favorable lifestyles that included at least four healthy habits** were also less likely to progress to mild cognitive impairment and dementia.

The results show that "more is better of these behaviors," says Hogervorst — in other words, the more healthy lifestyle factors you can combine, the better your chances of preserving your memory and staving off dementia. Notably, this held true even for people who carried the APOE gene associated with a higher risk of Alzheimer's disease.

"These results provide an optimistic outlook, as they suggest that although genetic risk is not modifiable, a combination of more healthy lifestyle factors are associated with a slower rate of memory decline, regardless of the genetic risk," wrote the study authors.

Can a hobby keep dementia at bay? Experts weigh in.

The study stands out because of its size and follow-up over time, and *because it was conducted in China, whereas "most publications are based on western high income countries,"* Carol Brayne, a professor of public health medicine at the University of Cambridge who researches older people and dementia, said in an email. However, the study authors acknowledge **several limitations**, including that people's own reports of health behaviors may not be fully accurate, and that the people who took part in the study were more likely to be leading healthy lives to begin with.

Some of the study's findings differ from the results of other large studies conducted in the United States and in Europe, says Hogervorst. For instance, the BMJ study found that the lifestyle factor with **the greatest effect on reducing memory decline was a balanced diet.** Other studies have suggested that diet matters less in old age than physical and mental exercise, says Hogervorst. Still, its results align with the broad scientific consensus that there is a **link between how we live and our cognitive function as we age** — and perhaps more important, suggest that it may never be too late to improve your brain health.

"The overall message from the study is a positive one," Snorri B. Rafnsson, associate professor of aging and dementia at the University of West London, said in an email. "Namely, that cognitive function, and especially memory function, in later life maybe positively influenced by regularly and frequently engaging in different health related activities."