

Will your brain stay sharp into your 90s? certain factors are key

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(HealthDay)—Some people in their 90s stay sharp whether their brain

harbors amyloid protein plaques—a hallmark of Alzheimer's disease—or not, but why?

That's the question researchers sought answers for among 100 people without dementia, average age 92, who were followed for up to 14 years. Their answer? A combination of genetic luck and a healthy, fulfilling lifestyle.

"The vast majority of research studies on aging and Alzheimer's disease try to understand what factors predict disease and [memory impairment](#). We turned these questions upside-down, asking 'What seems to protect us from disease and impairment in our 90s?'" said lead researcher Beth Snitz, an associate professor of neurology at the University of Pittsburgh.

"Understanding this kind of resilience may well help identify ways to prevent dementia," Snitz added.

The study reinforces some things scientists already knew, such as the importance of good cardiovascular health and building up a "cognitive [mental] reserve. These likely can help buffer against the effects of brain disease or injury later in life," she said.

Her team also found that people whose scores were normal on thinking and memory tests when the study began were less likely to have problems with their thinking skills, even if they had amyloid protein plaques in their brains (which have been linked to Alzheimer's disease).

The researchers also found that those with the *APOE2* gene mutation, which has been tied to a lower risk of Alzheimer's disease, were less likely to develop amyloid plaques than people who did not have this gene variant.

In fact, the *APOE2* mutation was linked with a six times lower risk of

developing plaques, the findings showed.

This mutation, however, is rare, occurring in only 10% of the people in the study. Among those with the mutation, 70% didn't develop plaques, the study authors noted.

Some lifestyle factors also affected brain aging. For example, those who never smoked were over 10 times more likely to keep their thinking skills, even with plaques, than smokers.

Also, high pulse [pressure](#) was linked with an increase in plaques. Pulse pressure is the [systolic blood pressure](#) (the top number in a blood pressure reading) minus the diastolic pressure (bottom number). Pulse pressure gets higher with age and is a sign of aging of the blood vessels.

The benefits of *APOE2* alleles are well known, as is the link between smoking and poor cardiovascular health, said Dr. Sam Gandy, associate director of the Mount Sinai Alzheimer's Disease Research Center at the Icahn School of Medicine at Mount Sinai in New York City.

Also, the link between poor cardiovascular health and dementia is well-known.

"The pulse pressure story here has emerged lately, as has the apparent risk of overaggressive lowering of the blood pressure in chronic hypertensives [those with chronic high blood pressure], and an apparent association between dementia risk and erratic blood pressure," he said.

Other studies have found a benefit from exercise in preventing dementia, but this study didn't look at exercise, Snitz said. They also didn't look at the effect of maintaining an active social life or mental activities, such as reading, on preventing dementia, she said.

The investigators did find, however, that having a paying job in your 70s was protective against later memory decline.

"Other studies have shown that continuing to work—or perhaps to keep one's mind engaged—past conventional retirement age may be cognitively protective," Snitz said.

"We also found that 'life satisfaction' in the 70s was protective against later cognitive decline in the 80s and 90s," she added.

The report was published online July 22 in the journal *Neurology*.

Maria Corrada, a professor of epidemiology at the Institute for Memory Impairments and Neurological Disorders at the University of California, Irvine, said, "Some of the characteristics found to be related to resistance and resilience to Alzheimer's pathology can be changed or modified—[pulse pressure](#), smoking, paid work and [life satisfaction](#)."

Achieving these goals may be a way to be resistant or resilient to brain abnormalities associated with Alzheimer's [disease](#), said Corrada, who co-authored an accompanying journal editorial.

"We believe that there are things we can do with our lifestyle that can help us maintain good cognitive health," she said.

More information: For more on dementia and Alzheimer's disease, head to the [Alzheimer's Association](#).

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