

# Amyloid levels in blood predict memory and thinking changes later in life

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Today (Wednesday 4 August) researchers in the U.S. have published

findings describing how levels of the hallmark Alzheimer's protein, amyloid in midlife are linked to subsequent decline in memory and thinking in later life. The scientific publication, *Neurology*, published the results.

Amyloid builds up in the brain during Alzheimer's, creating sticky clumps that are thought to play a role in disease.

There are several different forms of the [amyloid protein](#), some more sticky and harmful than others.

Research has already shown that people with Alzheimer's also tend to have more amyloid of a harmful type in their blood than healthy people.

In this study, the researchers looked at the levels of different forms of amyloid in [blood samples](#) from 2,284 people without memory problems in midlife—they had an average age of 59.

They found the ratio levels of amyloid measured in the blood helped predict whether someone went on to develop Alzheimer's disease, or [mild cognitive impairment](#) in later life (with most people now in their 70s).

Dr. Rosa Sancho, Head of Research at Alzheimer's Research UK, said:

"Improving the accuracy of Alzheimer's blood tests has long been a goal for researchers, but it's a tricky task, as protein levels can be influenced by so many factors that differ between individuals.

"Alzheimer's disease can get underway in the brain up to two decades before symptoms start to show. Drugs designed to target amyloid are the frontrunners in the race for better Alzheimer's treatments and are likely to be most effective at these early disease stages. But it is very difficult

to identify healthy people who will go on to develop symptoms years later. Blood tests like this could allow for rapid screening, and reduction of the numbers who would need more expensive PET scans before entering any future drug studies or receiving possible treatment.

"Although these findings have potential for supporting future research, exciting new developments in blood tests that focus on a different Alzheimer's protein, tau, hold the most promise for supporting an Alzheimer's diagnosis.

"A reliable [blood test](#) would be a huge boost for the dementia field. Now is a critical time to invest in research to realize the possible benefits of a [blood](#) test for Alzheimer's and begin to [test](#) potential life-changing drugs earlier."

**More information:** Kevin J. Sullivan et al, Association of Midlife Plasma Amyloid- $\beta$  Levels With Cognitive Impairment in Late Life: The ARIC Neurocognitive Study, *Neurology* (2021). [DOI: 10.1212/WNL.00000000000012482](#)

Provided by Alzheimer's Research UK

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