

Blood Test Predicts Start Of Alzheimer's Disease Symptoms

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At a Glance

- Researchers developed an Alzheimer's "clock" that uses a blood test to roughly predict the onset of Alzheimer's disease symptoms.
- The ability to predict symptom onset could aid in the selection of clinical trial participants and might one day enable improved decision-making for patients.

Alzheimer's disease is the most common cause of dementia, which affects more than 7 million Americans. Although there is no cure for this disease, treatments for early symptomatic Alzheimer's are now available clinically. People with Alzheimer's disease have a buildup of amyloid plaques and tau tangles in the brain. These features start accumulating well before symptoms appear. Predicting if and when a person with these features will develop Alzheimer's symptoms would help researchers design clinical trials that aim to prevent symptom development.

Previous research has found that a blood test for a protein called p-tau217 can identify individuals with amyloid plaques and tau tangles. The blood tests can help clinicians diagnose Alzheimer's in patients with cognitive impairment. Most U.S. clinicians can order such a test.

An NIH-funded research team led by Dr. Suzanne Schindler at Washington University in St. Louis examined whether p-tau217 blood tests could predict if and when someone will develop Alzheimer's symptoms. To do so, they developed an Alzheimer's "clock" model using data from people who underwent multiple p-tau217 blood tests over time. Their results were published on February 19, 2026, in [Nature Medicine](#).

The team analyzed p-tau217 levels in blood samples collected from 603 older people across two separate groups. Using these data, the team created a model that could predict the age at which elevated p-tau217 levels first appeared. This age was correlated with the age at which a person began showing symptoms of Alzheimer's with a median absolute error of three to four years.

The researchers also found that the time from when elevated p-tau217 first appeared to the onset of Alzheimer's symptoms got shorter as people aged. A person with elevated p-tau217 at age 60 would develop symptoms about 20 years later. Meanwhile, a person whose p-tau217 became elevated at age 80 would develop symptoms after only 11 years.

The findings suggest that the time it takes until the onset of Alzheimer's disease symptoms could be estimated from a single blood test. The models are not accurate enough yet for individual use but could be suitable for future Alzheimer's clinical trials. Further research is underway to refine the models and improve predictions.

Currently, the p-tau217 blood test is not recommended for cognitively normal people. It should not be used as a stand-alone tool for Alzheimer diagnosis.

"In the near term, these models will accelerate our research and clinical trials," Schindler says. "Eventually, the goal is to be able to estimate when individuals are likely to develop symptoms, which will help them and their doctors to develop a plan to prevent or slow symptoms."

This [research summary](#) was published by the National Institutes of Health on March 17, 2026.