

Blood tests for Alzheimer's may be coming to your doctor's office. Here's what to know

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A doctor points to PET scan results that are part of a study on Alzheimer's disease at Georgetown University Hospital, on Tuesday, May 19, 2015, in Washington. Credit: AP Photo/Evan Vucci, File

New blood tests could help doctors diagnose Alzheimer's disease faster



and more accurately, researchers reported Sunday—but some appear to work far better than others.

It's tricky to tell if memory problems are caused by Alzheimer's. That requires confirming one of the <u>disease's hallmark signs</u>—buildup of a sticky protein called beta-amyloid—with a hard-to-get brain scan or uncomfortable spinal tap. Many patients instead are diagnosed based on symptoms and cognitive exams.

Labs have begun offering a variety of tests that can detect certain signs of Alzheimer's in blood. Scientists are excited by their potential but the tests aren't widely used yet because there's little data to guide doctors about which kind to order and when. The U.S. Food and Drug Administration hasn't formally approved any of them and there's little insurance coverage.

"What tests can we trust?" asked Dr. Suzanne Schindler, a neurologist at Washington University in St. Louis who's part of a research project examining that. While some are very accurate, "other tests are not much better than a flip of a coin."

Demand for earlier Alzheimer's diagnosis is increasing

More than 6 million people in the United States and millions more around the world have Alzheimer's, the most common form of dementia. Its telltale "biomarkers" are brain-clogging amyloid plaques and abnormal tau protein that leads to neuron-killing tangles.

New drugs, Leqembi and Kisunla, can modestly slow worsening symptoms by removing gunky amyloid from the brain. But they only work in the earliest stages of Alzheimer's and proving patients qualify in



time can be difficult. Measuring amyloid in spinal fluid is invasive. A special PET scan to spot plaques is costly and getting an appointment can take months.

Even specialists can struggle to tell if Alzheimer's or something else is to blame for a patient's symptoms.

"I have patients not infrequently who I am convinced have Alzheimer's disease and I do testing and it's negative," Schindler said.

New study suggests blood tests for Alzheimer's can be simpler and faster

Blood tests so far have been used mostly in carefully controlled research settings. But a new study of about 1,200 patients in Sweden shows they also can work in the real-world bustle of doctors' offices—especially primary care doctors who see far more people with memory problems than specialists but have fewer tools to evaluate them.

In the study, patients who visited either a primary care doctor or a specialist for memory complaints got an initial diagnosis using traditional exams, gave blood for testing and were sent for a confirmatory spinal tap or brain scan.

Blood testing was far more accurate, Lund University researchers reported Sunday at the Alzheimer's Association International Conference in Philadelphia. The primary care doctors' initial diagnosis was 61% accurate and the specialists' 73%—but the <u>blood test</u> was 91% accurate, according to the findings, which also were published in the Journal of the American Medical Association.

Which blood tests for Alzheimer's work best?



There's almost "a wild West" in the variety being offered, said Dr. John Hsiao of the National Institute on Aging. They measure different biomarkers, in different ways.

Doctors and researchers should only use blood tests proven to have a greater than 90% accuracy rate, said Alzheimer's Association chief science officer Maria Carrillo.

Today's tests most likely to meet that benchmark measure what's called p-tau217, Carrillo and Hsiao agreed. Schindler helped lead an unusual direct comparison of several kinds of blood tests, funded by the Foundation for the National Institutes of Health, that came to the same conclusion.

That type of <u>test</u> measures a form of tau that correlates with how much plaque buildup someone has, Schindler explained. A high level signals a strong likelihood the person has Alzheimer's while a low level indicates that's probably not the cause of memory loss.

Several companies are developing p-tau217 tests including ALZpath Inc., Roche, Eli Lilly and C2N Diagnostics, which supplied the version used in the Swedish study.

Who should use blood tests for Alzheimer's?

Only doctors can order them from labs. The Alzheimer's Association is working on guidelines and several companies plan to seek FDA approval, which would clarify proper use.

For now, Carrillo said doctors should use blood testing only in people with memory problems, after checking the accuracy of the type they order.



Especially for primary care physicians, "it really has great potential to help them in sorting out who to give a reassuring message and who to send on to memory specialists," said Dr. Sebastian Palmqvist of Lund University, who led the Swedish study with Lund's Dr. Oskar Hansson.

The tests aren't yet for people who don't have symptoms but worry about Alzheimer's in the family—unless it's part of enrollment in research studies, Schindler stressed.

That's partly because amyloid buildup can begin two decades before the first sign of memory problems, and so far there are no preventive steps other than basic advice to eat healthy, exercise and get enough sleep. But there are studies underway testing possible therapies for people at high risk of Alzheimer's, and some include blood testing.

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