Alzheimer's Test Less Invasive With New Technique

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Scientists have uncovered a new potential diagnostic tool for recognizing early Alzheimer's that offers a non-invasive, commercially viable technique for early disease detection in clinical settings.

Alzheimer's affects roughly 5.8 million Americans, according to the Centers for Disease Control and Prevention. The progressive disease is the most common form of dementia and is associated with memory loss and cognitive decline in regions of the brain involved in memory, thought and language.
The disease is thought to be caused by the abnormal buildup of proteins in and around the cells in our brains, but exactly what triggers this process is still unclear.

Today, there is no known cure for Alzheimer's disease. However, new medications may offer relief to patients and slow down the development of symptoms, particularly **if it is diagnosed early.**

Screenshot of a blood sample for Alzheimer's. The disease is thought to be caused by the abnormal buildup of proteins in and around the cells in our brains.JARUN011/GETTY

One of the most useful signs for **detecting early Alzheimer's is a blood protein called phosphorylated tau, or "p-tau."**
"*Previous work has demonstrated that high levels of this 'p-tau 217' in blood are found in people with Alzheimer's pathology in the brain*," Tara Spires-Jones, president of the British Neuroscience Association and group leader at the UK Dementia Research Institute at the University of Edinburgh, Scotland, said in a statement.

Today, levels of p-tau biomarkers are **usually detected in cerebrospinal fluid**—the watery liquid that surrounds and protects our brain and spinal cord. However, accessing this fluid requires a highly invasive procedure. But, according to a new study, led by researchers at the University of Gothenburg in Sweden and published in the journal JAMA Neurology**, levels of p-tau 217 in the blood can be an equally reliable measure of the abnormal buildup of proteins in the brain.**

"These findings show that a blood test can accurately detect the presence of the proteins that build up in the brain to cause Alzheimer's disease," Charles Marshall, a professor of clinical neurology at Queen Mary University of London, said in a statement.

What's more, this diagnostic technique is already commercially available. "*The hope is that blood tests like this will improve access to a diagnosis in those seeking help for memory problems, and ultimately ensure that people can benefit from emerging treatments that can slow the progression of Alzheimer's disease*," Marshall said.

As **more Alzheimer's drugs become available**, these early diagnostics will become even more vital. "*This is important because **new drugs to treat Alzheimer's are coming to the market and already approved in the US,** which work best in people in early stages of Alzheimer's,*" Spires-Jones said**.**
"*Blood tests that can help detect people in early stages of [the] disease will be very important for early diagnosis and use of the new treatments in future*."
"*We will need further evidence to show that the blood test can accurately diagnose who is in the process of developing dementia, and that it can identify who is likely to benefit from treatments to slow down the disease,"* Marshall said.
"*We will also need to ensure that the blood test performs equally well in more diverse populations, so that it does not worsen existing health inequalities in access to diagnosis and treatment for dementia*."

Not everyone with these specific biomarkers will go on to develop dementia, Spires-Jones said. However, the test still offers a useful indicator of Alzheimer's-related risk factors that may support earlier disease detection in the future.