

# Depression might sometimes be early sign of Alzheimer's disease

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In some people, new-onset depression may stem from the same buildup of toxic plaques in the brain that have long been linked to Alzheimer's disease, according to a new study.

"Our findings provide additional support for depressive symptoms as an early feature of preclinical Alzheimer's disease," wrote a team led by Catherine Munro. She's a neuropsychologist at Brigham and Women's Hospital in Boston.

"It's not that [depression](#) caused Alzheimer's disease, it's just that Alzheimer's disease pathology affecting this part of the brain resulted in depressive symptoms relatively early on in the course," explained another expert, Dr. Marc Gordon, who wasn't involved in the study.

He's chief of neurology at Northwell's Zucker Hillside Hospital in Great Neck, N.Y.

As the Boston researchers point out, "[neuropsychiatric symptoms](#), particularly depression, are common in Alzheimer's disease." But the exact links between depression and Alzheimer's have been unclear.

In the new study, Munro and colleagues tracked rates of depressive symptoms in 154 people enrolled in the ongoing Harvard Aging Brain Study. The findings are [published](#) in the journal *JAMA Network Open*.

All were mentally unimpaired as they joined the study, and data were collected between 2010 and 2022. That data included the results of PET scans taken of each patient's brain once every two to three years for an average of just under nine years.

Those scans looked for the accumulation of amyloid protein plaques within brain tissues—a known hallmark of Alzheimer's disease.

Among people who had either mild depressive symptoms or none when they entered the study, "increasing depressive symptoms were associated with early amyloid accumulation in [brain regions](#) involved in emotional control," Munro's group reported.

They note that this link between depression and amyloid buildup occurred whether or not troubles with memory or thinking had already begun to appear.

According to Gordon, the new data help clear up some confusion around links between depression and Alzheimer's disease.

"I think in the past this may have been misconstrued sometimes as what was called 'pseudo depression'—that people who had cognitive impairments appeared to have symptoms that might mimic depression," he explained. "But I think it's become evident that depression may be a very early manifestation of the disease."

In other words, folks aren't always becoming depressed as a result of having mental difficulties tied to Alzheimer's—their depression might be linked to the same underlying amyloid buildup associated with Alzheimer's.

"I think this paper demonstrates that the actual neuropathology of disease in certain parts of the brain may be what's driving the relatively early presentation of depressive symptoms, independent of cognitive symptoms," Gordon said.

According to Munro's team, these insights could identify depression as a potential sign of Alzheimer's in at-risk people—one that arises prior to cognitive difficulties.

They note that early detection of Alzheimer's is becoming more important in an era where newly approved drugs can help slow the illness.

According to Gordon, there's even the possibility that these drugs, targeted at amyloid, might curb [cognitive decline](#) plus any

emotional/behavior issues, such as depression.

However, he stressed that all this research is in an early stage so "we don't know that yet," for sure.

The Boston researchers agreed that [depressive symptoms](#) might someday become part of the checklist for diagnosing Alzheimer's.

The findings "underscore the importance of monitoring new and increasing affective [emotional] symptoms in addition to cognitive changes in [older adults](#) presenting in psychiatry clinics and when screening for Alzheimer's disease," they said.

**More information:** Catherine E. Munro et al, Change in Depressive Symptoms and Longitudinal Regional Amyloid Accumulation in Unimpaired Older Adults, *JAMA Network Open* (2024). [DOI: 10.1001/jamanetworkopen.2024.27248](#)

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