



# What is LATE Dementia?



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**Increasingly, medical researchers recognize that dementia can have one or multiple pathologies that lead to common dementia symptoms. One relative newcomer to the understanding of dementia is called Limbic-predominant age-related TDP-43 encephalopathy (LATE). If this does not sound familiar, take heart. [Harvard Health](#) calls LATE “a common cause of dementia you’ve never heard of”.**

## LATE dementia pathology

According to the [National Institute on Aging](#) (NIA), “LATE causes problems with memory and thinking but has different underlying causes.”

LATE is a brain disease, as are other forms of dementia. In LATE dementia, abnormal clusters of a mis-folded protein called TDP-43 protein accumulate and damage parts of the brain involved in memory and thinking, says the NIA. Symptoms may include problems with memory, difficulty thinking and making decisions, trouble finding the right words, and wandering or getting lost, explains the NIA.

This brain pathology has been identified through autopsy studies, and there is currently no diagnostic method for LATE among people living with dementia. Yet understanding its presence is an important step in unraveling the mysteries of dementia and [mixed dementia pathologies](#).

Researchers are exploring whether there might be biomarkers for LATE, while also looking at how symptoms may be distinguished from those of Alzheimer’s or other dementias.

## Highest risk above age 80

Based on findings to date, it appears the highest risk of brain changes associated with LATE dementia occurs after age 80, notes the NIA. Autopsy research suggests that 40% of people at age 88 have the TDB-43 protein deposits, yet not all had been living with symptoms of dementia. LATE brain changes occurred in conjunction with evidence of Alzheimer’s-related proteins in about half of the study participants, notes NIA. They conclude that it’s likely “LATE can contribute to cognitive decline alone or in combination with other types of dementia.”

As compared with Alzheimer’s disease LATE by itself appears to cause “a more gradual clinical decline,” according to [Nelson et al.](#) However, in combination with Alzheimer’s pathologies, it causes “faster decline and more severe cognitive impairment.”

**continued** 



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## What is LATE Dementia? *continued*

[Pagnotti et al.](#) also found that LATE pathology layered with Alzheimer's leads to a faster decline in "cognitive performance across measures of memory, language, working memory, and processing speed than either pathology alone, reiterating that the presence of comorbid pathologies leads to more cognitive impairment and a faster trajectory of cognitive decline." This brain pathology could be one of many reasons that the progression of dementia is not uniform among elder patients with a diagnosis of Alzheimer's disease.

To enable targeted, person-centered care, comprehensive neuropsychiatric assessment is essential. A cadence of psychological testing is important, too, to understand the progress of an illness. While there is much more to learn about the brain changes involved in dementia, the emerging complexity of dementia underscores the value of multi-disciplinary assessment and care planning in the long-term care environment.

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