

Fluctuating levels of cholesterol and triglycerides linked to increased risk of dementia

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Older people who have fluctuating levels of cholesterol and triglycerides may have a higher risk of Alzheimer's disease and related dementias

compared to people who have steady levels, according to new research published in online issue of *Neurology*. While the study found a link, it does not prove that fluctuating levels of cholesterol and triglycerides cause dementia.

"Prevention strategies for Alzheimer's and related dementias are urgently needed," said study author Suzette J. Bielinski, Ph.D., of the Mayo Clinic in Rochester, Minnesota. "Routine screenings for cholesterol and triglyceride levels are commonly done as part of standard medical care. Fluctuations in these results over time could potentially help us identify who is at greater risk for dementia, help us understand mechanisms for the development of dementia and ultimately determine whether leveling out these fluctuations could play a role in reducing [dementia risk](#)."

Researchers used health care data to identify 11,571 people age 60 or older who did not have a prior diagnosis of Alzheimer's disease or dementia. Researchers looked at participants' measurements of total cholesterol, triglycerides, [low-density lipoprotein cholesterol](#) (LDL) and [high-density lipoprotein cholesterol](#) (HDL) on at least three different days in the five years before the start of the study.

Then researchers divided participants into five equal groups based on how much the measurements fluctuated. The lowest group had the least variation over time and the highest group had the most variation.

Participants were followed for an average of 13 years. During that time, 2,473 people developed Alzheimer's disease or another form of dementia.

After adjusting for variables that could affect risk of dementia including sex, race, [education](#) and lipid-lowering treatments, researchers found for total cholesterol, participants in the highest group had a 19% increased risk of dementia compared to those in the lowest group. Of the 2,311

people in the highest group, 515 developed dementia compared to 483 of the 2,311 people in the lowest group. For triglycerides, those in highest group had a 23% increased risk.

Researchers did not find a link between variations in LDL and HDL and an increased risk of dementia.

"It remains unclear why and how fluctuating levels of cholesterol and [triglycerides](#) are related to the risk of Alzheimer's disease," said Bielinski. "Further studies looking at the changes over time for this relationship are needed in order to confirm our results and potentially consider preventative strategies."

A limitation of the study was researchers looked at Alzheimer's disease and related dementias as a whole and did not differentiate between the types of [dementia](#).

More information: Ethan D. Moser et al, Association Between Fluctuations in Blood Lipid Levels Over Time With Incident Alzheimer Disease and Alzheimer Disease Related Dementias, *Neurology* (2023). DOI: 10.1212/WNL.0000000000207595 , [dx.doi.org/10.1212/WNL.0000000000207595](https://doi.org/10.1212/WNL.0000000000207595)

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