Lowering bad cholesterol may cut dementia risk, study finds

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Lowering your levels of bad cholesterol could reduce the risk of dementia by 26%, a study suggests.

People with low levels of low-density lipoprotein cholesterol (LDL-C) in their blood have less risk of dementia, and a reduced risk of Alzheimer's disease specifically, according to research published in the Journal of Neurology, Neurosurgery and Psychiatry.

Taking statins also provides an "additional protective effect" against the condition for those people with low levels of bad cholesterol, researchers found.

The number of people living with dementia worldwide is forecast to nearly triple to 153 million by 2050.

LDL-C is often referred to as bad cholesterol and can cause plaque to build in arteries, leading to cardiovascular disease, which can increase the risk of strokes, heart attacks and early death. However, the relationship between LDL-C levels and dementia has been less clear.

Last year, a Lancet report found 7% of cases of dementia were linked to high levels of bad cholesterol in midlife. The new study suggests having low levels of LDL-C could reduce the risk of dementia by a quarter.

Researchers collected data on 571,000 people in South Korea who had not been diagnosed with dementia – 192,213 people with LDL-C levels less than 1.8 mmol/L and 379,006 patients with LDL-C levels higher than 3.4 mmol/L (>130mg/dL).

Analysis of subsequent diagnoses of dementia showed that LDL-C levels below 1.8 mmol/L were associated with a 26% reduction in the risk of dementia and a 28% cut in the risk of Alzheimer's disease specifically, compared with LDL-C levels above 3.4 mmol/L.

Statins offered additional protection against dementia in the presence of low LDL-C levels. Among people with LDL-C levels below 1.8 mmol/L, statin use was linked with a 13% reduction in dementia risk and a 12% cut in risk of Alzheimer's disease compared with non-users.

This was an observational study, and no firm conclusions can be drawn about cause and effect. The authors also acknowledged several limitations, including the focus on baseline LDL-C levels when lipid profiles could change over time.

Nevertheless, they concluded: "Low LDL-C levels ... are significantly associated with a reduced risk of dementia, including Alzheimer's
disease-related dementia, with statin therapy providing additional protective effects."

Dr Francesco Tamagnini, a neurophysiologist at the University of Reading who was not involved with the study, said: "There is clearly more to the story of Alzheimer's than we first thought. This paper looks at the correlation and potential causal relationship between high levels of bad cholesterol and dementia risk. The results give a convincing argument for researchers to consider LDL cholesterol in addition to the classic approaches."

Dr Julia Dudley, the head of research at Alzheimer's Research UK, said the large study had found that people with lower LDL-C levels had a reduced risk of dementia. "The use of statins

seemed to offer a protective effect – even in those who already had cholesterol levels within a lower range," she added.

"However, dementia risk is complex and influenced by many factors. Without a detailed picture of what's going on in the brain, we do not know if there is a direct link between lower cholesterol and reduced dementia risk. Clinical trials will be key to understand what effects statins might be having on disease processes in the brain."

26%

The reduction in the risk of dementia associated with LDL-C levels below 1.8 mmol/L