

# Study reveals link between high cholesterol and Alzheimer's disease

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People with high cholesterol may have a higher risk of developing Alzheimer's disease, according to a study published in the September 13, 2011, issue of *Neurology*, the medical journal of the American Academy of Neurology.

"We found that high cholesterol levels were significantly related to brain plaques associated with Alzheimer's disease," said study author Kensuke Sasaki, MD, PhD, of Kyushu University in Fukuoka, Japan.

For the study, the cholesterol levels were tested for 2,587 people age 40 to 79 who had no signs of Alzheimer's disease. Then they examined 147 autopsied people who died after a long observation period (10 to 15 years). Of those, 50 people, or 34 percent, had been diagnosed with dementia before death.

The autopsies looked for plaques and tangles in the brain, both known to be trademark signs of Alzheimer's disease. Plaques are an accumulation of a form of the [protein amyloid](#), which occurs between nerve cells. Tangles are an accumulation of a different protein, called tau, which occurs inside [nerve cells](#).

People with high cholesterol levels, defined by a reading of more than 5.8 mmol/L, had significantly more brain plaques when compared to those with normal or [lower cholesterol](#) levels. A total of 86 percent of people with high cholesterol had brain plaques, compared with only 62 percent of people with low cholesterol levels.

The study found no link between high cholesterol and the tangles that develop in the brain with Alzheimer's disease.

In addition to high cholesterol increasing the risk of Alzheimer's disease, Sasaki previously found that [insulin resistance](#), a sign of diabetes, may be another risk factor for [brain plaques](#) associated with Alzheimer's disease.

"Our study clearly makes the point that high cholesterol may contribute directly or indirectly to plaques in the brain," Sasaki said, "but failed treatment trials of cholesterol-lowering drugs in Alzheimer's disease means there is no simple link between lowering cholesterol and preventing Alzheimer's."

Provided by American Academy of Neurology

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