

Liver disease linked to higher risk of dementia: Study

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People who have non-alcoholic fatty liver disease, a buildup of fat cells in the liver, may have a higher risk of dementia, according to a new study published in the July 13, 2022, online issue of *Neurology*.

Researchers also found that people with this form of liver disease who also have heart disease or who have had a stroke may have an even higher risk of dementia.

Non-alcoholic fatty [liver](#) disease affects up to 25% of people worldwide and is the most common chronic form of liver disease. Because there are often no symptoms, many people don't know they have it. When people do have symptoms, they can include fatigue and pain or discomfort in the upper right abdomen. While excessive alcohol use can cause fatty liver disease, non-alcoholic fatty liver disease can be due to obesity and related conditions like [high blood pressure](#) or type 2 diabetes. In a small percentage of people, it can lead to liver inflammation or [liver damage](#).

"Common [risk factors](#) for both non-alcoholic fatty liver disease and dementia include metabolic disorders like high blood pressure, diabetes and obesity," said study author Ying Shang, Ph.D., of the Karolinska Institute in Stockholm, Sweden. "So our study sought to determine if there was a link between this form of liver disease and a person's risk of dementia, independent of these risk factors."

For the study, researchers looked at 30 years of national Swedish patient registry records and identified 2,898 people age 65 and older who were diagnosed with non-alcoholic fatty liver disease. Researchers then identified 28,357 people without the disease who were matched for age, sex and city of residence at age of diagnosis.

After an average of more than five years of follow-up, 145 people with non-alcoholic fatty liver disease, or 5%, were diagnosed with dementia, compared to 1,291 people without liver disease, or 4.6%.

Researchers adjusted for cardiovascular risk factors like high blood pressure and diabetes and found that when compared to people without liver disease, people with non-alcoholic fatty liver disease had a 38%

higher rate of dementia overall. When looking specifically at [vascular dementia](#) caused by inadequate blood flow to the brain, researchers found people with non-alcoholic fatty liver disease had a 44% higher rate than people without liver disease. Researchers did not find a higher rate of Alzheimer's disease.

People with liver disease who also had [heart disease](#) had a 50% greater risk of dementia. Those who had liver disease and stroke had more than a 2.5 times greater risk of dementia.

"Our study shows that non-alcoholic fatty liver disease is associated with the development of dementia, which may be driven mainly by vascular damage in the brain," said Shang. "These results highlight the possibility that targeted treatment of this form of [liver disease](#) and co-occurring cardiovascular disease may reduce the risk of dementia."

A limitation of the study was that non-alcoholic [fatty liver disease](#) is underdiagnosed because people often do not have symptoms. Shang said this could lead to underestimating the association between [non-alcoholic fatty liver disease](#) and dementia.

Provided by American Academy of Neurology

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