

Novel heart ultrasound measures can be used to predict risk of developing dementia

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Published in *JAMA*, research from the University of Minnesota assessed if there is a link between heart health and dementia.

Using echocardiography—visual ultrasound of the heart—the [research](#) team was able to identify novel measures that are linked to a higher dementia risk.

"Atrial myopathy, a condition characterized by abnormal left atrial function and size, is an [independent risk factor](#) for dementia," said Dr. Lin Yee Chen, director of the cardiac electrophysiology section at the U of M Medical School and M Health Fairview, and principal investigator of the NIH grant that funded this study. "In this community-based [cohort study](#), lower left atrial function was associated with higher risk of dementia."

The study observed a cohort of 4,096 participants with an average age of 35 years. Participants were 60% women, 22% Black and 78% white. Of the cohort, there were 531 participants who developed dementia over a six year period.

When comparing the lowest to the highest quintile of left atrial function measures (reservoir strain, conduit strain, and contractile strain), the lowest quintile was significantly associated with 1.5 to 2.0-fold higher risk of developing dementia. These associations were independent of cardiovascular disease and atrial fibrillation. The research team found that the more common measures of left atrial size were not significantly associated with dementia.

"Results of this epidemiological study improve our understanding of the link between [cardiovascular disease](#) and increased risk of dementia," said Jacqueline D. Wright, Dr.P.H., a program officer in the division of cardiovascular sciences at the National Heart, Lung, and Blood Institute, part of the National Institutes of Health. "This study suggests that atrial myopathy increases risk of dementia, independently of atrial fibrillation. Further research may confirm this finding, help us to better define and diagnose atrial myopathy, and ultimately lead to improved treatments

that reduce the chance of developing dementia later in life."

Researchers recommend additional studies to confirm their findings and to establish a robust definition for atrial myopathy.

More information: Wendy Wang et al, Association of Echocardiographic Measures of Left Atrial Function and Size With Incident Dementia, *JAMA* (2022). [DOI: 10.1001/jama.2022.2518](https://doi.org/10.1001/jama.2022.2518)

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