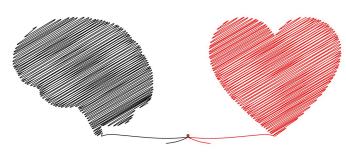


## Better heart health scores in midlife linked to lower risk of late-life dementia

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Brain tied to a heart. Credit: Gordon Johnson from Pixabay

A long-term study of 1,449 people in Finland found that those who had better scores on standard metrics of cardiovascular health in midlife, especially for behavioral factors such as smoking, had a lower risk of dementia later in life. Yajun Liang of Karolinska Institutet in Stockholm, Sweden, and colleagues present these findings in the open-access journal *PLOS Medicine*.

Previous research suggests that efforts to address modifiable risk factors, such as behaviors that impact heart health, could reduce the global number of people with dementia by up to one third. However, there is a lack of evidence on potential links between risk of late-life dementia and scores on standard heart health metrics in midlife and late life.

To gain further clarity on late-life risk of dementia, Liang and colleagues analyzed data on 1,449 participants in the Finnish Cardiovascular Risk Factors, Aging and Dementia study, enrolled 1972¬-1987 and assessed in 1998, and 744 dementia-free survivors were followed further into late life (2005¬-2008). Participants' heart health was evaluated from midlife to late life according to six factors classified as three behavioral (smoking

status, <u>physical activity</u>, and body mass index) and three biological factors (fasting plasma glucose, total cholesterol, and blood pressure). Dementia was diagnosed in 61 persons in the first follow up, and additional 47 persons in the second.

The researchers found that participants with intermediate or ideal cardiovascular health scores from midlife onwards, especially for behavioral factors, had a lower risk of dementia later in life than participants with poor scores.

The researchers found no significant overall association between heart health scores measured in late life and risk of dementia. However, when looking specifically at biological factors, ideal scores in late life were actually associated with greater risk of dementia. The authors note that this could be because some biological hallmarks of dementia might overlap with "ideal" scores on these factors, such as lower blood pressure and lower cholesterol. They also note that the major limitations of this study include the lack of data on diet and midlife plasma glucose, and high rate of attrition.

These findings suggest that maintaining lifelong cardiovascular health, particularly in the areas of smoking, exercise, and body mass index, could reduce dementia risk later in life.

**More information:** Liang Y, Ngandu T, Laatikainen T, Soininen H, Tuomilehto J, Kivipelto M, et al. (2020) Cardiovascular health metrics from mid- to late-life and risk of dementia: A populationbased cohort study in Finland. *PLoS Med* 17(12): e1003474. doi.org/10.1371/journal.pmed.1003474

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