Improving heart health at midlife and beyond could lower future risk of stroke, dementia

February 7 2023, by Laura Williamson, American Heart Association News

Good heart health promotes better brain health and can help reduce the risk for stroke and dementia. But is it ever too late to make a difference? New research suggests the answer is "no."

The study, to be presented Wednesday at the American Stroke Association's International Stroke Conference in Dallas, found that improving heart health in midlife and beyond was associated with a lower prevalence of stroke and dementia risk factors around two decades later. The findings are considered preliminary until full results are published in a peer-reviewed journal.

"Even small improvements can actually have an effect," said lead author Sanaz Sedaghat, an assistant professor in the division of epidemiology and community health at the University of Minnesota in Minneapolis.

A large body of research shows the same risk factors that contribute to heart disease—such as carrying too much weight, not being physically active or having high blood pressure—also contribute to cerebrovascular diseases such as stroke and dementia. However, there is less data about how changes in cardiovascular health in midlife and beyond may affect a person's risk for cerebrovascular disease as they age.

In the study, researchers used health data for 1,638 participants in the Atherosclerosis Risk in Communities study, collected twice in midlife (at average ages of 53 and 59) and once in late life (at an average age of 76).

At each visit, cardiovascular health scores were calculated using the American Heart Association's Life's Simple 7, a collection of behaviors and factors that greatly affect heart and brain health. These include diet, physical activity, weight, tobacco use, cholesterol, blood pressure and glucose levels. The data was collected before AHA added sleep as a major determinant of cardiovascular health in 2022, changing the name

to Life's Essential 8.

Participants received up to 2 points for each of the seven items, based on whether their adherence to target goals for each item was poor, intermediate or ideal. During the late-life visit, brain scans identified markers of cerebrovascular disease, including white matter hyperintensity volume, microbleeds and infarcts, or cell death, throughout the brain. These markers signal a greater risk for stroke or dementia.

People who had higher cardiovascular health scores in midlife and late life, or whose scores rose within midlife and from midlife to late life, had a lower prevalence of cerebrovascular disease markers. Every one-point increase in the score reduced the overall risk for cerebrovascular damage by roughly 7%.

"For me, the interesting part is even one point makes a big difference," Sedaghat said.

The study did not look at how improvements in individual components of the score affected cerebrovascular damage. But it did look at how changes in overall cardiovascular health affected some of the individual elements of cerebrovascular health.

For example, from midlife to late life, those who maintained ideal cardiovascular health—who had the highest scores—"had 33% lower odds of brain microbleeds and 37% lower odds of having infarcts," compared to people whose scores declined, Sedaghat said.

"You can prevent a lot of brain damage by following" these measures for good cardiovascular health, said Dr. Vladimir Hachinski, a distinguished university professor in clinical neurological sciences at Western University in London, Ontario, Canada. "And you can see the results

here."

Hachinski, a pioneer in the field of stroke and vascular dementia research who was not involved in the new study, said he wasn't surprised to see that improving cardiovascular health overall could lower the risk for specific types of brain damage and would love to see follow-up studies that dig deeper into which components of heart health have the most impact on brain health.

"The next important step is to look at which of these have the strongest relationships," he said.

The findings contribute to mounting evidence pointing to the need for greater collaboration between cardiovascular and cerebrovascular disease experts, Hachinski said.

If heart disease, stroke and dementia all develop because of the same set of risk factors, he said, "it only makes sense that we have to prevent them together."

Citation: Improving heart health at midlife and beyond could lower future risk of stroke, dementia (2023, February 7) retrieved 24 April 2024 from https://medicalxpress.com/news/2023-02-heart-health-midlife-future-dementia.html