

# Poor cardiovascular health linked to memory, learning deficits

11 June 2014

The risk of developing cognitive impairment, especially learning and memory problems, is significantly greater for people with poor cardiovascular health than people with intermediate or ideal cardiovascular health, according to a study in the *Journal of the American Heart Association*.

Cardiovascular health plays a critical role in brain health, with several [cardiovascular risk factors](#) also playing a role in higher risk for cognitive decline.

Researchers found that people with the lowest [cardiovascular health](#) scores were more likely have impairment on learning, memory and verbal fluency tests than their counterparts with intermediate or better risk profiles.

The study involved 17,761 people aged 45 and older at the outset who had normal cognitive function and no history of stroke. Mental function was evaluated four years later.

Researchers used data from the Reasons for Geographic and Racial Differences in Stroke (REGARDS) Study to determine cardiovascular health status based on The American Heart Association Life's Simple 7™ score. The REGARDS study population is 55 percent women, 42 percent blacks, 58 percent whites and 56 percent are residents of the "stroke belt" states of Alabama, Arkansas, Georgia, Louisiana, Mississippi, North Carolina, South Carolina and Tennessee.

The Life's Simple 7™ initiative is a new system to measure the benefits of modifiable health behaviors and risk factors in cardiovascular health, such as smoking, diet, physical activity, body mass index, blood pressure, total cholesterol, and fasting glucose. It classifies each of the seven factors of heart health as either poor, intermediate or ideal.

After accounting for differences in age, sex, race and education, researchers identified cognitive

impairment in:

- 4.6 percent of people with the worst cardiovascular health scores;
- 2.7 percent of those with intermediate health profiles; and
- 2.6 percent of those in the best cardiovascular health category.

"Even when ideal cardiovascular health is not achieved intermediate levels of cardiovascular health are preferable to low levels for better cognitive function," said lead investigator Evan L. Thacker, Ph.D., an assistant professor and chronic disease epidemiologist at Brigham Young University Department of Health Science, in Provo, Utah.

"This is an encouraging message because intermediate cardiovascular health is a more realistic target for many individuals than ideal cardiovascular health."

The differences were seen regardless of race, gender, pre-existing cardiovascular conditions, or geographic region, although higher cardiovascular health scores were more common in men, people with higher education, higher income, and among people without any [cardiovascular disease](#).

Cognitive function assessments involved tests to measure verbal learning, memory and fluency. Verbal learning was determined using a three-trial, ten-item word list, while verbal memory was assessed by free recall of the ten-item list after a brief delay filled with non-cognitive questions. Verbal fluency was determined by asking each participant to name as many animals as possible in 60 seconds.

Although mechanisms that might explain the findings remain unclear, Thacker said that undetected subclinical strokes could not be ruled out.

Provided by American Heart Association

APA citation: Poor cardiovascular health linked to memory, learning deficits (2014, June 11) retrieved 19 September 2022 from <https://medicalxpress.com/news/2014-06-poor-cardiovascular-health-linked-memory.html>

*This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.*