

Better heart health may improve cognitive health in kids

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Grade school–age children with better cardiovascular health may have better cognitive function, according to new research.

Scientists are increasingly looking at the mind-body connection, including how [heart health](#) might affect [brain function](#). Past studies of adults have linked poor cardiovascular health to a higher risk of cognitive decline, but there's been little research on how heart health affects young brains.

The [new research](#) analyzed the health data of 987 [children](#), ages 11 and 12, from 21 U.S. cities. The children took part in the Adolescent Brain Cognitive Development study, the largest long-term study of brain development and health in children in the United States.

Researchers measured participants' cardiovascular health using a tool known as [Life's Essential 8](#), a checklist for improving and maintaining cardiovascular health. Developed by the American Heart Association, the list includes eating a [healthy diet](#), not smoking, being physically active, getting enough sleep, keeping a healthy weight and controlling blood pressure, cholesterol and blood sugar.

Researchers looked at how the children's cardiovascular health scores matched up with their scores from a comprehensive cognitive test. They found that children with better cardiovascular health behaviors—the checklist items related to diet, physical activity, tobacco and sleep—showed slightly better executive cognitive function. Those are the [cognitive abilities](#) that aren't fully developed until early adulthood and include impulse control, focus, planning ahead, problem-solving and multitasking.

Better overall cardiovascular health that included all eight metrics also was associated with higher executive cognitive function.

"The message to pediatricians and cardiologists is that if you see children with high [blood pressure](#) or obesity, it's important to look at their brain health as well," said Dr. Augusto César F. De Moraes, the study's lead

researcher and an assistant professor in the department of epidemiology, [human genetics](#) and environmental science at the Austin, Texas, campus of UTHealth Houston School of Public Health.

The findings, which were presented Saturday in Philadelphia at the American Heart Association's [Scientific Sessions 2023](#) conference, are considered preliminary until full results are published in a peer-reviewed journal.

De Moraes said that because of the study's design, it could not prove cause and effect. He said he is currently conducting long-term studies on which cardiovascular factors might help predict better cognitive health from childhood through adolescence.

Dr. Amanda Marma Perak, a pediatric cardiologist at Ann and Robert H. Lurie Children's Hospital of Chicago, called the research "an important first attempt" at examining the relationships between cardiovascular health and brain function in youth.

"Intuitively, it makes sense that they would be related—for example, that a healthful diet with lots of vegetables might support better attention and other aspects of executive cognitive function as compared with a diet of processed foods and simple sugars. But, this study helps provide additional evidence that there is a relationship, and that this question merits further study."

Perak, who was not involved in the new research, served as the pediatric expert on the writing committee for last year's report that unveiled Life's Essential 8. She called for long-term pediatric studies measuring heart and [brain](#) health, especially studies that focus on strategies to improve cardiovascular health in children and adolescents.

For now, Perak called the new research "an exciting new finding" and

said it supports Life's Essential 8 as "a great way to focus on improving your child's total health, and a meaningful target to improve a vast array of [health](#) outcomes in individuals of varied ages."

More information: Study: [Life Essential 8 is Positively Associated With a Higher Executive Cognitive Function in US Children—ABCD Study](#)

Provided by American Heart Association

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