

Childhood obesity, high blood pressure, cholesterol linked to poor cognitive performance in the mid-30s and beyond...



Having cardiovascular risk factors from childhood to adulthood is linked to poor cognitive performance in a person's 30s, 40s and 50s, according to new research that followed children over three decades.

Researchers said the study was the first to highlight the impact of lifelong cardiovascular risk factors on the brain at mid-life.

The more cardiovascular risk factors a person had -- such as obesity, high blood pressure and high cholesterol levels -- the lower they performed on memory and thinking tests, according to the study published Monday in the ***American Heart Association journal Circulation***.

"One-third of U.S. children are overweight or have obesity which puts them at higher risk of Type 2 diabetes and high blood pressure in childhood and a higher risk of heart disease and stroke in adulthood," said Dr. Eduardo Sanchez, chief medical officer for prevention at the American Heart Association, in a statement.

Insights such as these are important for early detection and prevention, the study said, as there are currently no cures for Alzheimer's or other major causes of dementia.

"If we can resolve some of these issues early on, it's been shown that it not only leads to a much better cognitive life but also a much better





cardiovascular life as you hit mid-life and beyond,” said AHA spokeswoman Dr. Thuy Bui, the associate medical director of the emergency department at Children’s Healthcare of Atlanta, who was not involved in the study.

Three decades of study

The research began in 1980 when about 3,600 randomly selected Finnish boys and girls, ranging in age from three to eighteen, were chosen to be part of the **Cardiovascular Risk in Young Finns Study**. It was designed to study cardiovascular risk from childhood to adulthood.

The children, all of whom were white, were followed every three years until age twelve, then periodically over a 31- year span. On each visit, the researchers checked weight, cholesterol, blood pressure and insulin levels, while also looking at lifestyle factors such as smoking, alcohol use, diet and physical activity.

In 2011, more than 2,000 of the study participants, ranging in age from 34 to 49, underwent a computerized cognitive function test that measured episodic memory, short-term working memory, reaction time, visual processing and attention.



Researchers found that children who grew to adults with a consistently high systolic blood pressure -- that’s the top reading -- or high total cholesterol and LDL (bad) cholesterol performed poorly in memory and learning tests in mid-life.

People who were obese from childhood to adulthood had lower visual processing speed and more problems paying attention.

People who had all three risk factors -- high blood pressure, cholesterol and obesity -- from the time they were kids scored poorly in several areas: They had poorer memory, worse visual processing and associative learning skills, a decreased attention span and slower reaction speeds.

“We can use these results to turn the focus of brain health from old age and mid-life to people in younger age groups,” said first author Juuso Hakala, a doctoral student in preventive cardiology at the University of Turku in Finland.



“Children who have adverse cardiovascular risk factors might benefit from early intervention and lifestyle modifications,” Hakala said in a statement.

The study was observational, and therefore cannot confirm cause and effect without additional research, the authors said. In addition, since all participants were white, the study may not be generalizable to all populations.

Childhood interventions

If you’re concerned about your child’s current and future health, the first place to start is your pediatrician, Bui said. Not only can pediatricians check to make sure your child’s blood pressure, weight and cholesterol are within normal limits for their age, but they are a wealth of information.

“Pediatricians are the gatekeepers for prevention,” Bui said. “They can give you great ideas, tips, advice and guidelines about how much activity your child needs

or what fruits and vegetables kids need to eat.”

It’s up to parents to help their child overcome physical health challenges such as obesity, experts say, by being an example of healthy behavior.

“We know children tend to copy adults, especially when they’re younger,” Bui said, “If they see you trying to eat healthy, if they see you trying to get out and take a walk around the neighborhood, those are things that they imitate and copy and the more they copy, the more ingrained it will become in their future lives.”

Parents have many resources they can use, including those on the AHA website. One is a **10-day challenge** for families to stay active and eat healthy during the pandemic.

Some guidelines from the AHA on healthy behaviors:

Getting physical: Preschool-age children should engage in about three hours a day of active outdoor play and structured movements such as bean bag games, follow the leader and musical chairs.

Older children need at least 60 minutes per day of moderate - to vigorous-intensity activity, such as fast cycling, swimming, climbing briskly up a hill or playing in team sports such as soccer, field hockey, racquetball or basketball. It doesn’t have to be all at once, so try to schedule three 20-minute breaks during their day.

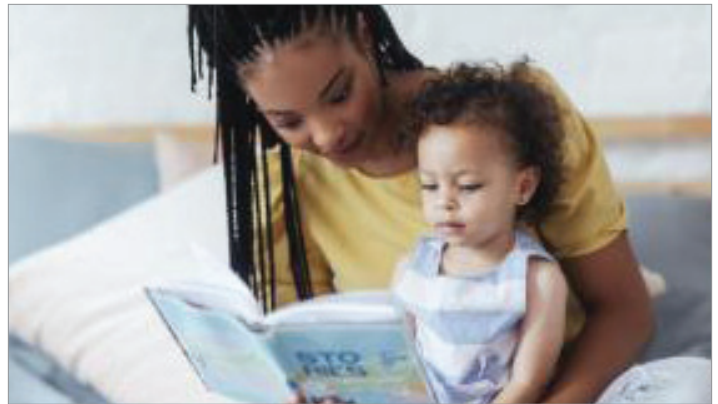
Healthy eating: The estimated calorie requirement for children range from 900 calories a day for a 1- year-old to 1,800 calories for 14- to 18- year-old girls and 2,200 calories for 14- to 18- year-old boys.

Pick from a variety of vegetables, fruits, nuts, whole grains, low-fat or fat-free dairies, lean meat and fish, the AHA says, and limit the intake of trans fats, processed meats and sweetened beverages.

How and when you eat matters as well. “Health eating habits are encouraged where meals are served with consistent timing, along with children selecting a variety of foods from healthy choices they already enjoy paired with new foods in a relaxed environment,” the AHA says.

Screen time: The American Heart Association (AHA) reinforces **existing recommendations** to limit screen time for children and teens to no more than one to two hours a day. The American Academy of Pediatrics has an **interactive tool to create a personalized media use plan for the family**.

Current ideas to help parents include getting the whole family active, scheduling a physical activity each day, removing the TV and mobile screen devices from the bedroom and planning TV viewing.



Related Article: This is your child's brain on books: Scans show benefit of reading vs. screen time



Related Article: MRIs show screen time linked to lower brain development in preschoolers



Related Article: There is explosive growth in screen use by toddlers, studies say



Related Article: A later bedtime linked with obesity for children under 6, study says