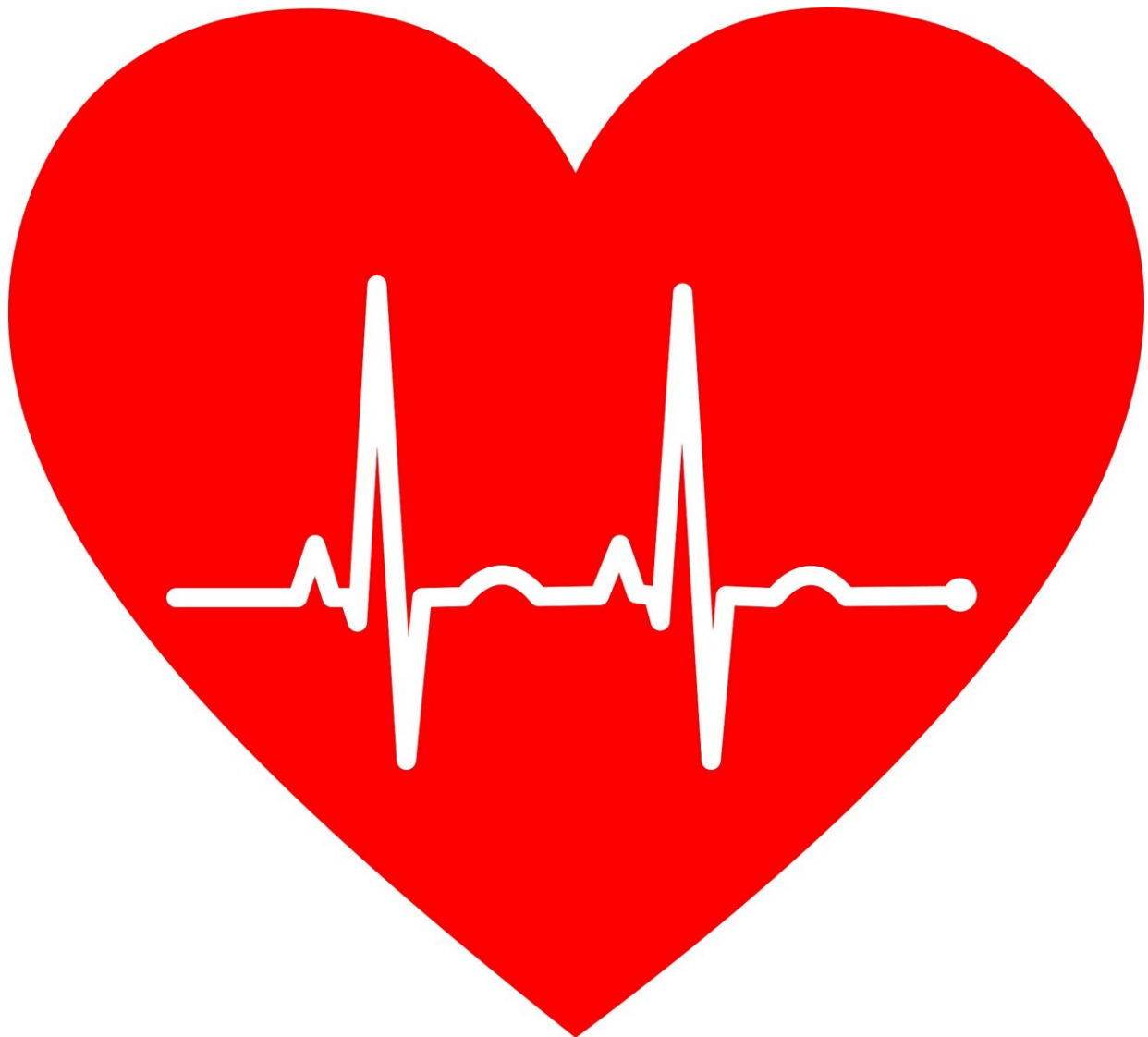


Education is linked to heart health decades later, study finds

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Formal education typically occurs in early life, and yet its ramification for cardiovascular health may last for decades, according to study by University of Pittsburgh School of Medicine and Northwestern University Feinberg School of Medicine researchers and published in [*JAMA Cardiology*](#).

To quantify the extent to which education shapes lifetime risk for cardiovascular disease events, such as a [heart attack](#) or stroke, a team led by Dr. Jared W. Magnani, UPMC cardiologist and associate professor of medicine at Pitt, examined six datasets following more than 40,000 men and women who identified as either Black or white. The data spanned three decades, from 1985 to 2015. The study accounted for competing risks, meaning death for non-cardiovascular causes.

The team's analysis showed that on average, cardiovascular disease strikes later in life for individuals with progressively higher education levels. Study participants with less than a [high school education](#) were 1.4 to 1.7 times more likely to experience a cardiovascular event than were college graduates.

The paper discussed potential mechanisms for these findings. Educational attainment is a known social determinant of health. In the U.S., it is closely intertwined with vocational opportunities, and in turn, access to both general and specialty-care treatments, material advantages and environmental and psychological exposures. Education also influences health literacy and health behaviors that may reduce cardiovascular risk.

The team also compared the average age at which cardiovascular events occurred to the number of years people lived after them, finding that education is protective not just in terms of whether people have a [cardiovascular event](#), but also when. "Education is associated with a longer health span, protecting people from cardiovascular events until

more advanced age," said Magnani.

The study showed that the association between education and risk of cardiovascular events differed by race. Higher educational attainment was more protective of [cardiovascular health](#) for white individuals in the study than it was for Black individuals. In fact, Black participants with [higher education](#) still had elevated risk compared to their white counterparts.

The reasons for this disparity are "both simple and complex," Magnani said, pointing to systemic and structural racism that manufactures segregation in housing, in opportunities and in both tangible and social resources. "The take-home is that education is necessary, but not sufficient, to temper risk in the face of profound, generational obstacles secondary to structural racism."

Magnani stressed that [educational attainment](#) deserves more attention in clinical-trial study design. "Social determinants of health aren't modifiers of the outcomes experienced by our patients—they're drivers of those outcomes." And yet education and other social determinants of health are often missing from research, he said.

"Education is something I can ask about at the bedside—and I do—because I know it's a profound risk factor for long-term clinical adversity."

More information: Jared W. Magnani et al, Educational Attainment and Lifetime Risk of Cardiovascular Disease, *JAMA Cardiology* (2023). [DOI: 10.1001/jamacardio.2023.3990](https://doi.org/10.1001/jamacardio.2023.3990)

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