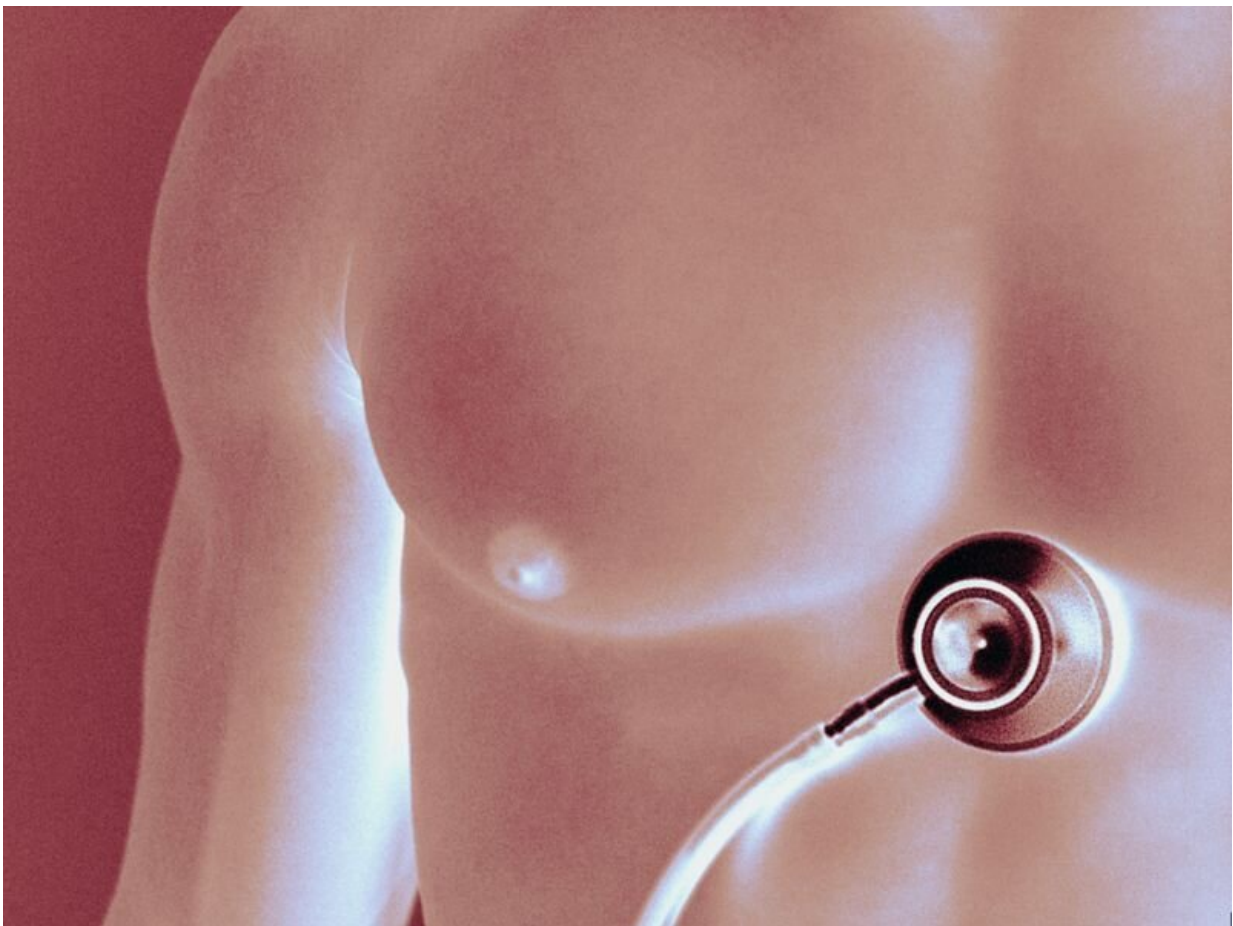


American College of Cardiology: Childhood risk factors linked to cardiovascular events in midlife

April 5 2022



Childhood risk factors are associated with cardiovascular events in midlife, according to a study published online April 4 in the *New England Journal of Medicine* to coincide with the annual meeting of the American College of Cardiology, held from April 2 to 4 in Washington, D.C.

David R. Jacobs Jr., Ph.D., from the University of Minnesota in Minneapolis, and colleagues conducted a [prospective cohort study](#) to examine whether childhood risk factors at ages 3 to 19 years were associated with [cardiovascular events](#) in adulthood after a mean follow-up of 35 years. The five risk factors evaluated were [body mass index](#), [systolic blood pressure](#), total cholesterol level, triglyceride level, and youth smoking.

A total of 319 fatal cardiovascular events occurred among 38,589 participants. The researchers found that the hazard ratios for a fatal cardiovascular event in adulthood varied from 1.30 per unit increase in the z score for total cholesterol levels to 1.61 for youth smoking. With respect to the combined-risk z score (unweighted mean of the five risk z scores), the hazard ratio for a fatal cardiovascular event was 2.71. In a subgroup of 13,401 participants with data on adult [risk factors](#), there were 115 fatal cardiovascular events; the adjusted hazard ratio with respect to the childhood combined-risk z score was 3.54 per unit increase, and with respect to the change in the combined-risk z score from childhood to adulthood, the mutually adjusted hazard ratio was 2.88 per unit increase.

"Rather than a sole focus on a medical approach of identifying children with elevated risk-factor levels, the current results would suggest that an equally relevant focus on public health strategies for maintaining ideal cardiovascular health in all children is warranted," the authors write.

More information: David R. Jacobs et al, Childhood Cardiovascular

Risk Factors and Adult Cardiovascular Events, *New England Journal of Medicine* (2022). [DOI: 10.1056/NEJMoa2109191](https://doi.org/10.1056/NEJMoa2109191)

Julie R. Ingelfinger, Childhood Risk Factors and Prediction of Adult Cardiovascular End Points, *New England Journal of Medicine* (2022). [DOI: 10.1056/NEJMe2203743](https://doi.org/10.1056/NEJMe2203743)

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