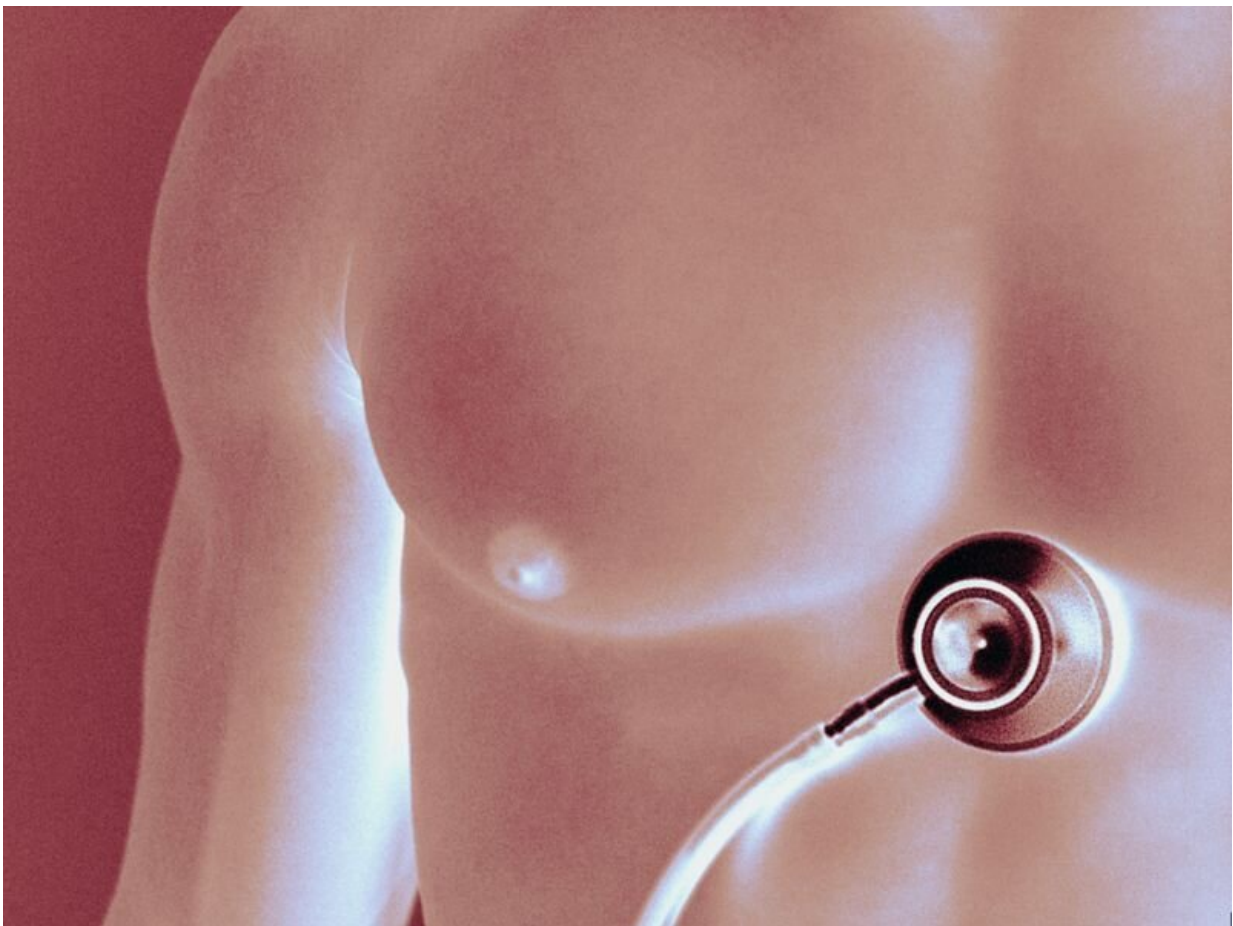


# American College of Cardiology: Childhood risk factors linked to cardiovascular events in midlife

April 5 2022

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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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