

Middle-age risk factors drive greater lifetime risk for heart disease

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A new study in today's *New England Journal of Medicine* reports that while an individual's risk of heart disease may be low in the next five or 10 years, the lifetime risk could still be very high, findings that could have implications for both clinical practice and public health policy.

"The current approach to [heart disease](#) prevention focuses on only short-term risks, which can give a false sense of security, particularly to individuals in their 40s and 50s," said Dr. Jarett Berry, assistant professor of [internal medicine](#) at UT Southwestern Medical Center who was lead author of the study. "Early [life decisions](#) we make can have a significant impact on the rest of our lives – and heart healthy choices are no different. The risk factors we develop in younger and middle ages are going to determine our heart disease risk across our lifetime."

Although medical experts have long known that the presence of risk factors was a predictor of heart disease across time, gender and race, Dr. Berry noted that the concept of lifetime risk represents an important change in how individuals and their physicians will approach heart disease risk and prevention.

"If we want to reduce [cardiovascular disease](#), we need to prevent the development of risk factors in the first place," he said. "What determines your heart disease risk when you are 70 or 80 is what your risk factors are when you're 40."

Examining the results of longitudinal studies over the past 50 years,

investigators found that people with two or more major risk factors in middle-age had dramatically higher lifetime risks for cardiovascular death, myocardial infarction and stroke across the lifespan. Similar trends were observed across all race and age groups.

The scientists used data collected in the Cardiovascular Lifetime Risk Pooling Project, measuring risk factors of more than 254,000 participants – including black and white men and women – at ages 45, 55, 65 and 75 years. Individuals with multiple risk factors had substantially higher lifetime risks for heart disease – as much as 10 times the rates of those without risk factors in some cardiovascular disease categories.

Most previous studies on heart disease risk estimates have focused on short-term risk over a five- or 10-year period, Dr. Berry said. Heart disease is much more common in older age, and therefore, nearly all individuals younger than 50 are considered low-risk. "But most adults in the U.S. considered low-risk in the short term are actually at high risk across their remaining life span," he said.

This latest study also showed that the decline in cardiovascular disease rates over the past several decades reflects changes in the prevalence of the risk factors rather than access to and effects of better treatment, Dr. Berry said. Smoking and cholesterol levels have fallen in recent decades, for instance, due to behavioral changes in the general population.

Nevertheless, researchers found that the long-term risk for cardiovascular disease within each risk factor group has remained similar. "Regardless of where you were born or when you were born, the effects of risk factors on [lifetime risk](#) for heart disease are about the same," Dr. Berry said.

Therefore, preventing the development of risk factors in the first place

will be more effective than treating the effects of these [risk factors](#) once they develop, researchers concluded. The study was funded by the National Heart, Lung and Blood Institute.

Provided by UT Southwestern Medical Center

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