

Decades-long heart study shows longer lives, lower cardiovascular risks

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People taking part in the historic Framingham Heart Study are living longer and with less risk of having a heart attack, stroke or dying from coronary heart disease, according to a new analysis that underscores the power of prevention, screening and treatment efforts.

Scientists have known for decades about the risks posed by plaque

buildup in the arteries. Coronary heart disease, for example, caused 360,900 deaths in the U.S. in 2019, according to statistics from the American Heart Association.

But researchers wanted to learn more about how the risk has changed over the years. To do that, they focused on "remaining [lifetime risk](#)," or the probability that a person, at any given age, will experience cardiovascular disease during their remaining years.

Researchers used data from the ongoing Framingham Heart Study that started in 1948 and now includes participants from multiple generations. The investigators calculated participants' remaining lifetime risk from age 45 for having a [heart attack](#) or stroke or dying from coronary heart disease during three epochs: 1960-1979, 1980-1999 and 2000-2018.

Life expectancy rose by 10.1 years for men and 11.9 years for women across the three time periods. The remaining lifetime risk of cardiovascular disease fell between 1960-1979 and 2000-2018—from 36.3% to 26.5% in women, and from 52.5% to 30.1% in men.

Researchers also found men and women in the 21st century were having their first cardiovascular disease events later in life. From 2000-2018, the average age of a first cardiovascular event was 8.1 years later for men and 10.3 years later for woman compared with 1960-1979.

"It's a very strong message of prevention and hope," said Dr. Vasan Ramachandran, lead author of the study published Monday in the AHA journal *Circulation*. "This tells us that better health care access, [preventive measures](#), smoking cessation and better treatment of high blood pressure and cholesterol may be helpful in lowering the lifetime probability of developing a heart attack or a stroke."

The other success story is "we are postponing the onset of heart attacks

and strokes by as much as a decade. We're increasing the period of living with [good health](#)," said Ramachandran, chief of preventive medicine and epidemiology at Boston University's School of Medicine and School of Public Health.

With the pandemic easing up, people who haven't seen a doctor in a while should schedule an exam and have their blood pressure, blood sugar and cholesterol checked, he said. "The findings show us that the benefits of prevention, screening and proper treatment accrue. If you do these things in middle age, you're rewarded with healthy life years later."

He said the study was limited by its focus on a largely [white population](#) in the northeastern U.S., and future studies are needed in more diverse populations living in different areas.

Ramachandran also called for further research into [gender differences](#) because the findings for the most recent time period showed remaining lifetime risk of [coronary heart disease](#) was higher in men, but with stroke, it was higher in women.

"We need a deeper dive and a deeper understanding of why this might be the case," he said.

Monica Serra, who was not involved in the study, said new research is needed to see if rising rates of obesity and diabetes "will counteract the gains observed from our current medical and technological advancements."

Despite the progress shown in the study, the overall risk of [cardiovascular disease](#) remains high, "highlighting the need for continued screening and primary prevention efforts, as well as identification of more effective and widely accessible screening and treatment options," said Serra, an associate professor and research health

scientist at the University of Texas Health Science Center at San Antonio.

Even with medical advancements and better treatments, it's important for people to take charge of their own heart health, Serra said.

They can do that by adopting a healthier lifestyle earlier in life and being aware of their [heart](#) disease and stroke risks, "particularly those that are modifiable—blood pressure, cholesterol and diabetes control, and smoking reduction."

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