

# Scientists quantify healthy years gained by avoiding risk factors

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Obesity, hypertension and diabetes are known risk factors for heart failure, a chronic condition in which the heart cannot pump enough blood to meet the body's needs. For the first time, scientists have quantified the average number of heart failure-free years a person gains by not developing those risk factors by age 45, according to a study scheduled for presentation at the American College of Cardiology's 64th Annual Scientific Session in San Diego.

The study found that people who had obesity, hypertension and diabetes by age 45 were diagnosed with heart failure 11 to 13 years earlier, on average, than people who had none of those risk factors by age 45. People who had only one or two of the risk factors, but not all three, developed heart failure an average of three to 11 years earlier than people with none of the risk factors.

"The message from this study is that you really want to prevent or delay the onset of these risk factors for as long as possible," said Faraz Ahmad, M.D., a cardiology fellow at Northwestern University and the study's lead author. "Doing so can significantly increase the number of years you are likely to live free of heart failure."

More than five million people in the United States have heart failure, according to the Centers for Disease Control and Prevention. Heart failure increases the risk of other heart problems, damage to other organs and has a variety of symptoms that affect quality of life, such as fatigue, swelling and persistent coughing or wheezing. About half of

people with heart failure die within five years of being diagnosed.

Ahmad said the findings offer a new way for doctors to communicate with patients about the importance of avoiding key risk factors.

"In the clinic, we often give patients metrics of risk that are relative and abstract," he said. "It's a much more powerful message, when you're talking to patients in their 30s or 40s, to say that they will be able to live 11 to 13 years longer without heart failure if they can avoid developing these three risk factors now."

Ahmad added that the results could also help policymakers or public health practitioners more accurately predict the future prevalence of heart failure in America's aging population. According to the CDC, heart failure costs the nation an estimated \$32 billion annually in [health care services](#), medication and missed days of work.

The researchers analyzed pooled data from four large studies including a total of 18,280 people conducted over the past 40 years. They identified nearly 1,500 cases of heart failure and compared the age at which patients were diagnosed with heart failure against their health status and risk factors at age 45.

In the study, people without obesity, hypertension or diabetes at age 45 who developed heart failure were diagnosed at an average age of 80 in men and 82 in women. People with all three risk factors who developed heart failure on average received their diagnosis in their late 60s or early 70s.

Despite advances in heart disease treatment and prevention, Ahmad said the pattern was consistent across data collected over the past 40 years.

"The associations between these risk factors and heart failure has been

remarkably stable over time," Ahmad said. "Although the prevalence of some of these risk factors has changed, the association remains the same."

The researchers plan to further investigate the data to determine whether the use of medications to control [risk factors](#) helps to delay the onset of [heart failure](#). They also plan to assess whether there are any differences in the risk factor associations among different racial groups.

The study, "Hypertension, Obesity, Diabetes, and Heart Failure-Free Survival: The Cardiovascular Lifetime Risk Pooling Project," will be presented on March 14 at the American College of Cardiology's 64th Annual Scientific Session in San Diego. The meeting runs March 14-16.

**More information:** Ahmad will present the study, "Hypertension, Obesity, Diabetes, and Heart Failure-Free Survival: The Cardiovascular Lifetime Risk Pooling Project," on Saturday, March 14 at 10 a.m. PT/1 p.m. ET/5 p.m. UTC in Poster Hall B1.

Provided by American College of Cardiology

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