

Preventing heart failure risk factors in midlife substantially lowers risk

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Preventing the development of hypertension, obesity and diabetes by the age of 45 to 55 years may lead up to an 86 percent lower risk for heart failure through the remainder of life, according to research published today in *JACC: Heart Failure*.

Approximately 5.7 million adults in the United States currently suffer from heart failure. This population faces a significantly reduced quality of life and higher mortality rates. Hypertension, obesity and [diabetes](#) are highly prevalent and preventable risk factors for heart failure.

"As the incidence of heart failure is increasing, it is important that we accelerate the research effort on the prevention of heart failure," said Christopher O'Connor, M.D., FACC, Editor-in-Chief of *JACC: Heart Failure*.

Researchers conducted a pooled, individual-level analysis sampling from communities across the United States. They found that at ages 45 and 55 years, respectively, 53.2 percent and 43.7 percent of participants were free of hypertension, obesity and diabetes. After the index age of 45 years, during 516,537 person-years of follow-up, 1,677 cases of incident heart failure were identified. At an index age of 55 years, during 502,252 person-years of follow-up, 2,976 cases of incident heart failure were identified.

At index age 45 and 55 years, people without hypertension, obesity and diabetes had a substantially lower risk for heart failure. This pattern was

seen in men, women, white participants and black participants. Diabetes was found to have a particularly strong association with shorter heart failure-free survival, as those without diabetes lived on average between 8.6 and 10.6 years longer without heart failure.

Men at age 45 years without any of the three risk factors lived an average of 10.6 years longer free of heart failure, while women at age 45 without any of the three risk factors lived an average of 14.9 years longer without heart failure. White and black participants without risk factors lived 12.4 and 12.9 years longer, respectively. Similar trends were seen for index age 55 years.

"This study adds to the understanding of how individual and aggregate risk factor levels, specifically in middle age, affect incident heart failure risk over the remaining lifespan," said John T. Wilkins, M.D., M.S., from the Department of Preventive Medicine at the Northwestern University Feinberg School of Medicine and senior author of the study. "These findings help reframe the heart failure prevention discussion by quantifying how the prevention of the development of these [risk factors](#) can lengthen healthy and overall survival and could vastly reduce the population burden of [heart failure](#)."

More information: Faraz S. Ahmad et al, Hypertension, Obesity, Diabetes, and Heart Failure–Free Survival, *JACC: Heart Failure* (2016). DOI: [10.1016/j.jchf.2016.08.001](https://doi.org/10.1016/j.jchf.2016.08.001)

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