

Elevated blood pressure in young adults associated with middle-age heart issues

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A medical student checking blood pressure using a sphygmomanometer and stethoscope. Image: Wikipedia.

Young adults who had blood pressure that was elevated but still within normal range for long periods of time were more likely to show signs of cardiac dysfunction in middle age, according to a study published today in the *Journal of the American College of Cardiology*.

Researchers followed 2,479 men and women for 25 years, conducting health assessments—including [blood pressure](#) readings—seven times during the study period beginning as part of the Coronary Artery Risk Development in Young Adults, or CARDIA study. Participants ranged in age from 18 to 30 at the start of the study in 1985 and 1986. At the end of the study, researchers also used cardiac imaging to assess several measures of heart function.

Researchers found that participants who had blood pressure that was on the higher end of the normal range when they were between the ages of 18 and 30 were more likely to have left ventricle dysfunction in [middle age](#). Researchers said their work suggests [young adults](#) should take steps to reduce elevated blood pressure by reducing sodium intake, maintaining an ideal body weight, being physically active and adhering to any recommended medical treatments for [high blood pressure](#).

The study was limited in that it relied on subclinical endpoints, and additional research is needed to validate the results using clinical endpoints.

"Our findings provide further support for the importance of good risk factor control early in life," said João A.C. Lima, MD, from the division of cardiology at Johns Hopkins University School of Medicine and the lead author of the study. "Many participants were not hypertensive at the beginning of the study; however, chronic exposure to higher blood pressure, even within what is considered the normal range, is associated with [cardiac dysfunction](#) 25 years later."

"These findings bring into question whether [blood pressure monitoring](#) should begin in childhood, particularly in obese children," said Valentin Fuster, MD, PhD, and Editor-in-Chief of JACC.

"This research raises critical questions about the importance of blood pressure even earlier in life and the need for longitudinal studies beginning in childhood or youth," said Thomas H. Marwick, MD, PhD, MPH, from the Menzies Institute for Medical Research at the University of Tasmania in Australia and author of an editorial comment accompanying the study. "The ability to identify at-risk patients at an earlier age could prevent the development of heart dysfunction and failure."

Provided by American College of Cardiology

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