

Social Factors Help Explain Worse Cardiovascular Health Among Adults in Rural Versus Urban Communities

NIH-funded study reveals variables, such as poverty and education, that may underpin higher rates of heart disease and its risk factors.

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A research team funded by the National Institutes of Health (NIH) uncovered higher rates of heart disease and worse heart health affecting adults living in rural communities compared to urban areas and the factors that likely drive these differences.

They found adults living in rural areas were more likely than those living in large cities to have heart disease (7% vs. 4%), high blood pressure (37% vs. 31%), high cholesterol (29% vs. 27%), obesity (41% vs. 30%), and diabetes (11% vs. 10%). Across all age groups, the differences in high blood pressure, obesity, and diabetes were largest among adults ages 20–39 living in rural areas vs. cities.

Investigators reviewed data from more than 27,000 adults who participated in the 2022 [National Health Interview Survey](#) to understand geographical differences in rates of heart disease and risk factors for conditions that affect the heart and blood vessels, such as high blood pressure, diabetes, and obesity. Since higher rates of heart disease among adults in rural areas compared to cities have been established, they also sought to understand factors driving these variations.[The study was published in [JAMA Cardiology](#).]

They found that factors such as levels of income and education, having enough food to eat, and owning a home mostly explained the higher rates of people in rural areas who had high blood pressure, diabetes, and heart disease. Prior [research](#) has also shown how difficult circumstances, such as living in poverty, can affect cardiovascular health, including increasing inflammation in the body.

Additionally, having access to healthcare, which is important for overall health, did not factor into these differences. Lifestyle risk factors for heart disease such as smoking and being less active also didn't explain these differences, although adults living in rural areas were more likely to smoke and be less active.

The researchers also found that rates of high blood pressure, high cholesterol, diabetes, and heart disease were largest in rural areas compared to cities in the South. Rates of obesity were higher across rural areas throughout the U.S., especially in the Northeast.

More than 60 million U.S. adults live in rural communities, and heart disease remains the nation's leading cause of death. In this study, 1 in 7 adults lived in rural areas (counties of less than 50,000 people), 1 in 2 lived in small or medium-sized cities (counties of 50,000 to less than 1 million people), and 1 in 3 lived in large cities (counties of 1 million or more).

Identifying factors driving the higher burden of heart disease and risk factors in rural regions remains a critical research priority. The authors note that insights from their study could inform public health efforts and policies to support and improve the cardiovascular health of people — especially younger adults — living in rural areas.

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