

US sees sharp increase in hypertension-related deaths

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While it typically has no symptoms, high blood pressure—or hypertension—has serious health consequences. Rates of deaths related to hypertension have risen by 72% and 20% in rural and urban areas of the U.S., respectively, according to research presented at the American College of Cardiology's Annual Scientific Session Together with World

Congress of Cardiology (ACC.20/WCC).

Hypertension is defined by the ACC/AHA High Blood Pressure in Adults guideline as blood pressure consistently above 130 mm Hg systolic pressure or 80 mm Hg diastolic pressure and is a leading risk factor for [heart disease](#). Over time, [high blood pressure](#) causes damage to arteries and restricts blood flow, which can weaken the [heart muscle](#) or lead to events such as a heart attack or stroke. The study reveals a dramatic uptick in [hypertension](#)-related deaths nationwide between 2007 and 2017.

"This is a public health emergency that has not been fully recognized," said Lakshmi Nambiar, MD, cardiovascular disease fellow at the University of Vermont Larner College of Medicine and the study's lead author. "Hypertension-related cardiovascular deaths are rising in the U.S. across all age groups, all regions and in both urban and rural populations. These findings are alarming and warrant further investigation, as well as preventative efforts."

The research is based on over 10 million death records extracted from the Centers for Disease Control and Prevention database. Researchers included in their assessment all individuals whose [death certificates](#) listed cardiovascular disease as a cause of death and hypertension as a contributing factor. They analyzed trends in hypertension-related deaths over time in various [age groups](#) and geographic regions.

After adjusting for age, the results revealed an increase in hypertension-related deaths across all categories. The increase was most pronounced in the rural South, where individuals showed a 2.5-fold higher hypertension-related death rate compared to the other regions. Age-adjusted death rates increased in the rural South from 23.9 deaths per 100,000 people in 2007 to 39.5 deaths per 100,000 people in 2017.

Nambiar said that a combination of poor diet, a high prevalence of obesity and diabetes and a lack of access to health care could contribute to the regional differences. She added that targeted public health measures could help close the gap by addressing some of those factors.

The findings contrast with other studies that have pointed to a recent decline in death rates from coronary heart disease, which is caused by hardened or narrowed arteries and is the most common form of heart disease. The reduction in coronary heart disease deaths has been attributed to improvements in treatment approaches, in particular the widespread use of statins to control cholesterol.

"We didn't expect to see such a dramatic increase," Nambiar said. "Since hypertension is a leading risk factor for coronary heart disease—for which [death](#) rates have improved—I thought we'd see an improvement in hypertension in conjunction with that overall trend. But we're just seeing it get worse and worse."

Since the increase in hypertension-related deaths does not align with trends in [coronary heart disease](#) deaths, Nambiar said the data could suggest an increased prevalence of heart failure, a form of heart [disease](#) in which the [heart](#) becomes too weak to adequately pump blood through the body.

Though more research is needed, the findings underscore the importance of taking hypertension seriously, Nambiar said. Individuals can benefit from more frequent [blood pressure](#) screenings at their doctor's office, in the community and at home, as well as nonpharmacologic interventions like changes to diet and exercise. Health care providers should closely follow 2017 ACC/AHA High Blood Pressure in Adults guideline for hypertension diagnosis and treatment and discuss options with patients, she said. Public health measures could also help to reduce the upstream factors that lead to hypertension.

This study was simultaneously published online in the Journal of the American College of Cardiology.

More information: Lakshmi Nambiar et al. MULTI-VESSEL SPONTANEOUS CORONARY ARTERY DISSECTION PRESENTING WITH CARDIAC ARREST, *Journal of the American College of Cardiology* (2020). [DOI: 10.1016/S0735-1097\(20\)33413-6](https://doi.org/10.1016/S0735-1097(20)33413-6)

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