

Extremely high blood pressure in African-Americans is five times the national average

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Extremely high blood pressure that leads to strokes, heart attacks and acute kidney damage, classified as hypertensive emergency, is five times higher in inner-city African-American patients than the national average, according to a recent study co-lead by a Rutgers researcher.

The study, which is the largest one of its kind to compare the development of hypertensive emergency in a United States inner city, appears in the journal *Blood Pressure*.

One in three adults have [high blood pressure](#) known as hypertension, with the highest rates among African-Americans. In addition to being very common, high [blood](#) pressure in African-Americans develops earlier in life but has lower control rates compared to other racial-ethnic groups. Higher than average blood pressure results in the development of serious health complications that come with it. The study sought to determine the prevalence and risk factors of high blood pressure escalating to severe cases among African-Americans.

"Extremely high blood pressure rates are an alarming and significant health concern for the African American population," said Irina Benenson, a Rutgers School of Nursing assistant professor. "Developing targeted interventions to control for the major risk factors may reduce the risk of drastic increases in blood pressure and thus reduce the risk of organ damage as a result."

Researchers analyzed [medical records](#) of 3,568 patients with elevated

blood pressure treated in the emergency department of Newark Beth Israel Medical Center, a New Jersey hospital that serves predominantly African-American communities. Half of these patients had severe increases in blood pressure.

The results showed that patients who were male, 65 years or older, or who had diabetes, chronic heart or kidney disease were at the highest risk for developing extremely high blood pressure, which lead to potentially life-threatening complications such as worsening congestive heart failure and [heart attack](#). These patients also were found to be at a significantly higher risk for developing kidney failure, stroke, and a ruptured blood vessel in the brain known as hemorrhagic stroke.

According to the researchers, this was also the first study to identify low hemoglobin as a risk factor for severely elevated blood pressure.

"Anemia is common in people with high blood pressure, especially in those who have diabetes or kidney disease. Low hemoglobin was found to contribute to a severe rise in blood pressure, but further studies are needed to fully explain the associate between the two," said Benenson.

The study highlights alarming rates of severely elevated blood pressure in African-Americans and suggests that treatments to control diabetes, chronic heart and [kidney disease](#) and anemia may reduce the development of an extremes in blood pressure and related serious complications.

While [psychosocial stress](#) such as occupational stress, housing instability, social isolation and racism sometimes faced by African Americans were not within the scope of this specific study, Benenson believes that these could be a few factors that can contribute to higher rates of blood pressure in African Americans.

"These factors occur more often in African Americans than in other

racial groups, and it is proposed that chronic stress can activate stress hormones that constrict blood vessels and elevate blood pressure. However, more studies are needed to confirm."

More information: Frederick A. Waldron et al, Prevalence and risk factors for hypertensive crisis in a predominantly African American inner-city community, *Blood Pressure* (2019). [DOI: 10.1080/08037051.2019.1568183](https://doi.org/10.1080/08037051.2019.1568183)

Provided by Rutgers University

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