

Managing high blood pressure in diabetics may prevent life-threatening organ damage

October 24 2018, by Caitlin Coyle



A Rutgers study suggests that extremely high blood pressure, not just diabetes, is responsible for severe organ damage due to hypertensive emergencies in African-Americans with diabetes. Credit: Rutgers School of Nursing

The most effective way to prevent life-threatening complications of extreme hypertension in African-Americans with diabetes is to better control their blood pressure, according to a Rutgers study, the largest of

its kind.

The study, which appears in *Clinical and Experimental Hypertension*, included 783 diabetic and 1,001 non-diabetic patients from a New Jersey hospital [emergency](#) department that serves predominantly African-American communities. It is the first study to look at the risk factors and prevalence for hypertensive emergencies—or drastic increases in [blood pressure](#)—in diabetic African-Americans, a population disproportionately affected by complications of high blood pressure.

"Our study found that both diabetics and non-diabetics with hypertensive emergencies had similar rates of severe injury to target organs," said Irina Benenson, a Rutgers School of Nursing assistant professor.

"Combined with the fact that diabetics with hypertensive emergency also had significantly higher levels of blood pressure, this suggests that the occurrence of severe damage to vital organs is not because of just diabetes but because of the accompanying severely elevated blood pressure."

According to Benenson, hypertensive emergencies are associated with life-threatening damage to the brain, heart and kidneys. An estimated one percent to two percent of people with high blood pressure will have a hypertensive emergency during their lives, and the likelihood is even higher among people with diabetes.

Benenson said the risk of hypertensive emergencies in diabetic African-Americans was significantly higher in those with cardiovascular conditions, kidney disease and anemia, and that having medical insurance and access to a healthcare provider did not lessen complications of severely elevated blood pressure. The research is consistent with another recent study, which showed that uncontrolled hypertension was associated with a 57 percent increased risk of cardiovascular disease in people with diabetes.

"Given the fact that the presence of severely elevated blood pressure is the strongest driver of damage to vital organs in individuals with [diabetes](#), the most important intervention for preventing hypertensive emergencies would be to better manage patients' blood pressure," said Benenson. "Carefully selected interventions that improve patients' adherence to medications, and strategies that help providers to overcome clinical inertia, or a failure to increase therapy when [blood pressure](#) goals are unmet, may potentially reduce target organ damage associated with hypertensive emergencies."

More information: Irina Benenson et al, Hypertensive emergencies in diabetic patients from predominantly African American urban communities, *Clinical and Experimental Hypertension* (2018). [DOI: 10.1080/10641963.2018.1516774](#)

Provided by Rutgers University

Citation: Managing high blood pressure in diabetics may prevent life-threatening organ damage (2018, October 24) retrieved 25 April 2024 from <https://medicalxpress.com/news/2018-10-high-blood-pressure-diabetics-life-threatening.html>

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