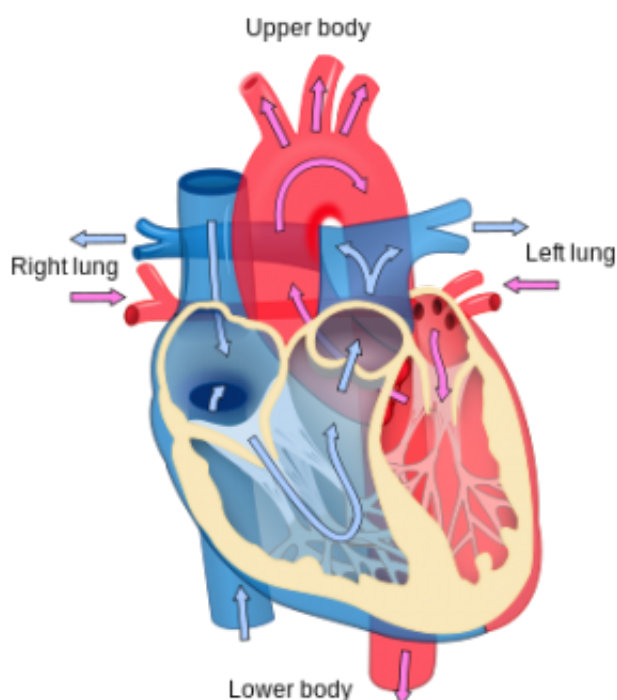


Popular hypertension drugs linked to worse heart health in blacks compared to whites

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Heart diagram. Credit: Wikipedia

Drugs commonly used to treat high blood pressure, and prevent heart attacks and strokes, are associated with significantly worse cardiovascular outcomes in hypertensive African Americans compared to whites, according to a new comparative effectiveness research study led by researchers in the Department of Population Health at NYU Langone Medical Center.

The study, published on September 15 in the *Journal of the American College of Cardiology* (JACC), is unique, the authors say, in that it evaluates racial differences in cardiovascular outcomes and mortality between hypertensive black and white patients whose treatment was initiated with angiotensin-converting-enzyme (ACE) inhibitors, outside of a clinical trial. ACE inhibitors are one of several classes of drugs commonly

prescribed to individuals with hypertension to prevent deaths, heart attack, kidney failure, heart failure and stroke.

Evidence from randomized controlled trials has previously indicated that ACE inhibitors may not provide the same benefits in blacks compared to whites. However, blacks have been largely underrepresented in the majority of these studies, despite the fact they have disproportionately higher rates of hypertension-related morbidity and mortality than other racial and ethnic groups, according to study authors.

"We know what works in clinical trials. But when you go into the [real world](#) clinical practice setting, physicians don't often translate that evidence into practice. This is the first study that looks at this issue in a real- world, clinical practice setting," says Gbenga Ogedegbe, MD, MPH, lead author of the study and a professor in the Department of Population Health at NYU Langone Medical Center.

Data for the study came from electronic health records of nearly 60,000 patients who have high [blood pressure](#) and received care between 2004-2009 within New York City's Health and Hospital Corporation (HHC). HHC operates all public hospitals and clinics in New York City and is the largest such institution in the country. Approximately 35 percent of patients seen in the HHC system are African American.

The investigators compared rates of all-cause mortality, heart attack, stroke, and congestive heart failure between African American and [white patients](#) who were prescribed one of four classes of antihypertensive drugs to treat [high blood pressure](#): ACE inhibitors, beta blockers, calcium-channel blockers, or thiazide-type diuretics. In African Americans, ACE inhibitor use was associated with a statistically significant rate of poorer [cardiovascular outcomes](#) (8.7 percent compared to 7.7 percent) but not in whites (6.4 percent

compared to 6.74 percent). African Americans were no more likely than whites to have adverse effects linked to use of ACE inhibitors.

The reasons for the noted racial disparity in clinical effectiveness of ACE inhibitor-based regimes between African Americans and whites remain unclear, though the prevailing theory is that blacks are less responsive to antihypertensive treatment with ACE inhibitors. African-Americans are also at greater risk for cardiovascular events than whites.

"The results of this study adds to a growing consensus among physicians that treatment of hypertension in blacks should not be initiated with ACE inhibitors," said Dr. Ogedegbe, director of Division of Health & Behavior and NYU's Center for Healthful Behavior Change.

In January, the Joint National Committee recommended initiating other treatments besides ACE inhibitors in patients of African descent, and there are other guidelines in preparation that can be informed by this study, Dr. Ogedegbe noted.

Provided by New York University School of Medicine

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