

Blacks more likely to get amputations due to blocked blood flow, study finds

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Whites were more likely to have less-drastring procedure to restore lower-leg circulation.

(HealthDay)—Race appears to play a role in determining what kind of treatment is offered to patients grappling with severely restricted blood flow to their feet, new research suggests.

Hospitalized black patients are notably more likely to undergo an amputation than hospitalized whites, the study found.

In turn, researchers said, whites were more likely than blacks to be afforded some form of [blood flow](#) restoration surgery in place of amputation.

"The main take-home point is that a large [disparity](#) exists between the

treatment that white and non-white patients receive, and this disparity appears to go beyond simple differences in [insurance status](#) and other variables that are often cited as the cause," said lead study author Dr. Tyler Durazzo.

"There are many possible explanations for the disparity, and further studies are needed to delve deeper into all possible causes," he added.

The study, appearing online March 20 in *JAMA Surgery*, looks at intervention options for a condition known as "lower extremity ischemia." The condition develops after hardening of arteries increasingly reduces blood flow to the leg and foot, ultimately cutting off essential oxygen and [nutrients](#).

Progressive loss of function in the affected extremity leads to hospitalization, at which point patients and physicians are faced with the choice of whether to attempt to save the affected area by amputation or less drastic surgery.

To explore the possible impact of race on such decisions, a Yale University School of Medicine team led by Durazzo (now a resident at Massachusetts General Hospital) analyzed information from a large U.S. database.

The Nationwide Inpatient Sample gathers statistics on all [hospital discharges](#) that occur at more than 1,000 hospitals nationwide, amounting to roughly one in five hospital discharges across the country. Durazzo and his colleagues sifted through nearly 775,000 of those discharges, which took place from 2002 to 2008.

The analysis looked specifically at patients who had been hospitalized for serious blood flow constriction problems in the leg or foot area, brought on by peripheral vascular disease, hardening of the arteries in

the extremities or arterial hardening following prior bypass graft surgery (also in the lower leg or foot).

Nearly 351,000 of the patients ultimately underwent either surgery aimed at restoring blood flow to (revascularizing) the affected areas, or they had an amputation. A little less than a third faced amputation while two-thirds had a revascularization procedure.

An in-depth look at patient demographics revealed that race did appear to *independently* affect the likelihood of undergoing an amputation versus blood flow surgery, even after accounting for differences in insurance coverage or personal wealth.

The bottom line: Just being black meant a 78 percent greater chance for undergoing an amputation than non-black patients, the study found.

Other issues that seemed to play a slightly stronger role than race in determining whether a patient would undergo amputation was if the patient had gangrene when hospitalized or if the patient had already previously undergone blood flow restoration surgery.

So although black patients were more likely to be hospitalized with diabetes or chronic renal failure—and were more likely to fall into an income bracket where Medicaid coverage kicked in—being black appeared to influence a decision regarding amputation.

The authors further found that being wealthy didn't protect blacks from the amputation gap, which actually was widest in facilities located in higher income areas. What's more, blacks were most likely to face an [amputation](#) at facilities that were actually the best prepared and equipped to perform blood flow surgery.

Two experts not involved in the new study discussed the findings.

For his part, Dr. Murray Mittleman, director of the cardiovascular epidemiology research unit with the Beth Israel Deaconess Medical Center, Harvard Medical School, suggested that it can be very difficult to tease out exactly what's going on.

"Certainly differences in incidence, treatment and prognosis across different groups by gender, race or income level has been a very important topic that's been investigated for a very long time," Mittleman said. "But as to whether it's a question of underlying biological differences, social differences or behavioral differences among both patients and providers, we really don't know the answer."

Dr. Joel Zonszein, director of the Clinical Diabetes Center at Montefiore Medical Center in New York City, agreed that the situation is "always very complex."

"There are certainly many other variables to consider," Zonszein said. "Cultural, social, access of care, medication adherence. For example, I deal with a large African American and Hispanic population, and you do see that there is less adherence to medications. So they often come to the hospital with more advanced disease. And if someone comes to the [hospital](#) with early gangrene, it's very different than if someone comes in with late gangrene. That makes a difference in terms of amputations."

On the other hand, he added, "It's also true that while stroke is much higher among African Americans than white patients, they actually have a much lower coronary 'burden,' despite having more classic risk factors like smoking or obesity."

More information: For more on peripheral artery disease, visit the [U.S. National Library of Medicine](#).

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