

# Amputation risks highest amongst poor and black PAD patients

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Poverty and black race are independently predictive of greater amputation risk among patients with narrowing of the blood vessels, or peripheral artery disease (PAD), according to preliminary research presented at the American Heart Association's Scientific Sessions 2016.

PAD is a serious disease that occurs when fat, cholesterol, and other substances accumulate in [blood vessels](#) away from the heart, restricting blood flow. In addition to increasing the risk for heart attack and stroke, untreated PAD can cause gangrene, or tissue death, requiring amputation. Usually affecting the legs, PAD can cause symptoms such as pain and cramping during walking or other activity that disappear with rest, although some patients have no symptoms at all.

Using data from 208,194 veterans with PAD in the Veterans Affairs database from 2003 to 2014, researchers found:

- Blacks had a 43 percent higher risk of amputations when compared to whites in the same [socioeconomic status](#).
- Poverty was associated with a 37 percent increase in amputation risk, independent of race.

"There may be biological mechanisms still unknown as to why black patients are at a higher risk for amputations in PAD, but access to care is an important independent contributor to the risk," said study lead author Shipra Arya, M.D., S.M., assistant professor of surgery at Emory University School of Medicine in Atlanta, Georgia, and vascular surgeon

at the Atlanta Veterans Administration Medical Center in Decatur.

"Treatment for PAD is multimodal. It includes optimal medical management of risk factors associated with cardiovascular disease, in addition to supervised exercise, which is not yet covered by insurance."

Researchers compared PAD amputations by socioeconomic status across different zip codes nationwide, defining the poorest communities as those with more than 30 percent of inhabitants below the poverty level. Sixteen percent of participants were black, 83 percent were white, and almost all were male. During an average follow-up of just over five years, 14,981 major amputations occurred.

Previous evidence indicated that the risk of amputation was greater among blacks than among whites, but whether this difference stemmed from biological factors or access to care and other socioeconomic factors was unclear. Accordingly, investigators examined the risk of PAD amputation by race and socioeconomic status as indicators for access to care.

"Patients living in zip codes with a high poverty burden also have incrementally higher risk of amputation, suggesting a role for access to care in determining outcomes for PAD," Arya said.

The main [risk](#) factors for developing PAD are smoking, diabetes, high blood pressure and high cholesterol. Fortunately, PAD usually is easily treatable with lifestyle changes and medication.

The study was observational so could only identify associations, not causes. Researchers also caution that the study included mostly male veterans, so its findings may not apply to other groups.

Provided by American Heart Association

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