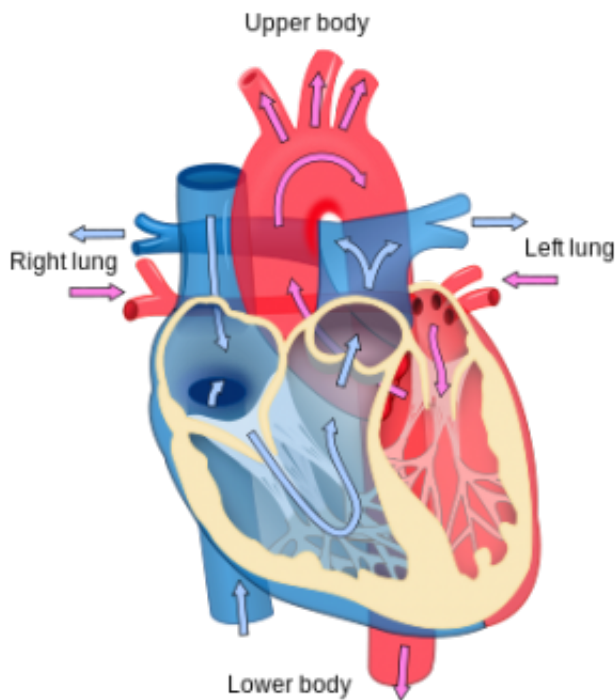


# Socioeconomic status associated with peripheral artery disease risk

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Heart diagram. Credit: Wikipedia

Previous research has established a link between lower socioeconomic status and an increased risk of cardiovascular disease. In a new study led by Brigham and Women's Hospital (BWH), researchers have found that there are also higher rates of peripheral artery disease (PAD) in individuals with low income and lower attained education levels in the United States.

These findings are published online ahead of print in *Circulation: Cardiovascular Quality and Outcomes*.

"Our finding highlights the need to focus on education and advocacy efforts for these at-risk populations," said Reena Pande, MD, MSc, co-author of the publication and an associate physician in the Cardiovascular Division at BWH.

PAD, a circulatory problem in which narrowed arteries reduce [blood flow](#) to limbs, most commonly to the legs, causes leg pain and is often an indicator of more wide-spread atherosclerosis. Individuals with PAD are also at [increased risk](#) of having heart disease and blockages in the blood flow the brain. PAD can be treated with lifestyle modifications such as exercising, eating a healthy diet and quitting tobacco, and some individuals may require a procedure to restore blood flow to the limbs.

Researchers analyzed data from the National Health and Nutrition Examination Survey from 1999 to 2004. PAD was defined using a standard of care measurement, an ankle–brachial index of  $\leq 0.90$ . Measures of [socioeconomic status](#) included poverty–income ratio, a ratio of self-reported income relative to the poverty line, and attained education level.

Of 6,791 eligible participants, researchers found that PAD prevalence was significantly higher in individuals with low income and lower education. Individuals in the lowest of the 6 poverty– income ratio categories had more than a 2-fold increased odds of PAD compared with those in the highest poverty–income ratio category, an association that was still significant after accounting for other risk factors. Lower attained education level was also associated with higher PAD prevalence, but after adjusting for other factors, this association was no longer significant.

Researchers note that education and income are only two of many potential measures of socioeconomic status and that other measures may also have an effect on overall health, including a network of family and friends and access to resources and opportunities that may impact health outcomes.

"We need dedicated approaches to PAD awareness efforts, research endeavors, and treatment strategies that focus on those individuals of low socioeconomic strata who may be most likely to be affected by PAD," Pande said. Specifically, we need to target awareness efforts to the subpopulations that have the greatest gaps in awareness and at the same time are at higher risk of developing PAD. In the evaluation and implementation of new therapies or treatment strategies, we must consider that not only may differences in outcomes arise from socioeconomic differences, but we must also develop strategies that facilitate access to these beneficial treatments to reach all segments of the population equally."

Provided by Brigham and Women's Hospital

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