

# Fatter legs linked to reduced risk of high blood pressure

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Adults with fatter legs—meaning they have a higher percentage of total body fat tissue in their legs—were less likely than those with a lower percentage to have high blood pressure, according to new research to be

presented Sept. 10-13, 2020, at the virtual American Heart Association's Hypertension 2020 Scientific Sessions.

"Ultimately, what we noted in this study is a continued discussion of 'it's not just how much fat you have, but where the fat is located,'" said principal investigator Aayush Visaria, M.P.H., a fourth-year medical student at Rutgers New Jersey Medical School in Newark, New Jersey. "Although we know confidently that fat around your waist is detrimental to health, the same cannot be said for leg fat. If you have fat around your legs, it is more than likely not a bad thing and may even be protecting you from hypertension, according to our findings."

The investigators examined the rate of three types of high blood pressure in relation to the percentage of fat [tissue](#) in the legs of nearly 6,000 adults enrolled in the 2011-2016 National Health & Nutrition Examination Surveys. Average age of the participants was 37, nearly half were female and 24% had high blood pressure, defined as blood pressure >130/80 mm Hg.

Special X-ray scans measured fat tissue in the legs, and these measures were compared to overall body fat tissue. Investigators classified participants as having either a high or low percentage of leg fat, with high fat defined as 34% or more for males, and 39% or more for females.

Participants with higher percentages of leg fat were less likely than those with lower levels of fat to have all types of high blood pressure. The analysis found:

- Compared to those with lower percentages of leg fat, participants with higher percentages of leg fat were 61% less likely to have the type of high blood pressure where both numbers are elevated.
- In addition, risk for participants with higher leg fat was 53%

lower for diastolic high blood pressure (the second number in a blood pressure reading, measuring pressure between heart beats) and 39% lower for systolic high blood pressure (the first number in a reading, measuring pressure when the heart beats).

After adjusting for various factors, such as age, sex, race and ethnicity, education, smoking, [alcohol use](#), cholesterol levels and waist fat, the risk for high blood pressure was still lower among participants with higher percentages of leg fat, although not as low as before adjusting for these factors.

"If these results are confirmed by larger, more robust studies, and in studies using easily accessible measurement methods like thigh circumference, there is the potential to affect patient care," Visaria said. "Just as waist circumference is used to estimate abdominal fat, thigh circumference may be a useful tool, although it's a bit cumbersome and not as widely studied in the U.S. population."

Several limitations could have affected the study's results. First, the study could not determine cause and effect, since information on [blood pressure](#) and percentage of fat tissue in the legs were measured at the same time. Second, a larger group of participants is needed to yield more information about the effects on high [blood pressure](#) of varying degrees of fat tissue in the legs. Finally, all study participants were under the age of 60, so the results may not apply to older adults, who are generally at greater risk for [high blood pressure](#).

Provided by American Heart Association

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