New study presents evidence that blood pressure should be measured in both arms

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As heart disease continues to be one of the leading causes of death in the United States, practitioners and patients alike are looking for ways to cut risk factors and identify new clues to assist with early detection. New research published in the March issue of *The American Journal of Medicine* suggests that there is an association between a difference in interarm systolic blood pressure and a significant increased risk for future cardiovascular events, leading researchers to recommend expanded clinical use of interarm blood pressure measurement.

While blood pressure is a widely used medical metric, most measurements are taken only using one arm. Measuring interarm blood pressure involves taking two readings, one for each arm. Increased interarm systolic blood pressure differences are defined as 10 mmHg or greater, and while a link between interarm blood pressure and cardiovascular risk was suspected, little data existed to support the hypothesis until now.

This new study examined 3,390 participants aged 40 years and older from the Framingham Heart Study. All subjects were free of cardiovascular disease at baseline, but investigators found that participants with higher interarm systolic blood pressure differences were at a much higher risk for future cardiovascular events than those with less than a 10 mm Hg difference between arms.

"In this large prospective, community based cohort of middle-age men and women free of cardiovascular disease, an increased interarm systolic blood pressure difference was found to be present in nearly 10% of individuals and is associated with increased levels of traditional cardiovascular risk factors," explains lead investigator Ido Weinberg, MD, Institute for Heart Vascular and Stroke Care, Massachusetts General Hospital, Boston. "Furthermore, an increased interarm systolic blood pressure difference is associated with an increased risk for incident cardiovascular events, independent of traditional cardiovascular risk factors."

Researchers also found that participants with elevated interarm blood pressure difference were older, had a greater prevalence of diabetes mellitus, higher systolic blood pressure, and a higher total cholesterol level.

According to these findings, investigators suggest practitioners should consider including blood pressure readings in both arms in order to get the most accurate readings possible and detect any differences in interarm blood pressure. "Even modest differences in clinically-measured systolic blood pressures in the upper extremities reflect an increase in cardiovascular risk," says Weinberg. "This study supports the potential value of identifying the interarm systolic blood pressure difference as a simple clinical indicator of increased cardiovascular risk."

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