

# Around-the-clock monitoring may unmask hypertension in African-Americans

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Wearing an ambulatory blood pressure monitoring device that measures blood pressure around-the-clock may help identify African Americans who have masked or undetected high blood pressure outside of the doctor's office, a tricky condition that can signal high blood pressure in the clinic down the road, according to new research in the American Heart Association's journal *Hypertension*.

The reverse of [white coat hypertension](#) (higher [blood pressure readings](#) at the doctor's office than at home), masked hypertension is [normal blood pressure](#) in the doctor's office but high readings outside of the office. Masked hypertension is easy to miss, and can occur during the day or night.

Blood pressure naturally fluctuates throughout the day. To discover who might have masked hypertension among a high-risk population, researchers used ambulatory blood pressure monitoring, an easy technology that involves patients wearing a compact cuff around the arm that is connected to a device worn at the hip. The advantage to ambulatory [blood pressure monitoring](#) is that it provides readings of blood pressure over a 24-hour period while doing normal daily activities, whereas home monitoring requires a patient to check his or her own blood pressure at single points in time at rest and at home, and cannot be performed while the patient sleeps.

The study included 317 African-American participants (69 percent women) from the Jackson Heart Study, an ongoing, population-based study in Jackson, Mississippi, that examines the factors associated with and occurrence of heart disease among African Americans.

Participants did not have high blood pressure and were not on high blood pressure medication when enrolled. They wore ambulatory blood pressure monitors at the first clinic visit and their readings were compared with clinic readings taken at a two

subsequent visits. Participants were followed for an average of 8.1 years and 187 developed high blood pressure.

Researchers found:

Overall, masked hypertension was associated with a significantly increased risk for high blood pressure detected in the clinic.

Clinic high blood pressure developed in 79.2 percent of participants with any masked hypertension compared to only 42.2 percent of participants without masked hypertension. Clinic [high blood pressure](#) also developed more in participants who had masked daytime hypertension, masked nighttime hypertension, or masked 24-hour hypertension.

"Our study found that African Americans with any masked hypertension had twice the risk of developing clinic hypertension when compared to those who had both normal clinic and normal out-of-office blood pressure," said Marwah Abdalla, M.D., M.P.H., lead study author and cardiologist at Columbia University Medical Center in New York.

"The risk was also high among those with masked nighttime hypertension—a condition where blood pressure is only elevated at night or while asleep. We also found that even among those with normal blood pressure for example, (less than 120 mm Hg/80 mm Hg) during a clinic visit, individuals with masked hypertension had a high risk of developing clinic hypertension."

Using ambulatory [blood pressure](#) monitoring and paying closer attention to day- and nighttime-masked hypertension may help those at the greatest risk, Abdalla said.

Provided by American Heart Association

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