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[American Heart Association](#)

High blood pressure patients advised to use home monitors

American Heart Association joint scientific statement

DALLAS, May 22 People with hypertension should routinely monitor their blood pressure at home to help manage the disease, according to a new joint scientific statement from the American Heart Association, American Society of Hypertension and the Preventive Cardiovascular Nurses Association.

The statement is published online in *Hypertension: Journal of the American Heart Association*, the *Journal of the American Society of Hypertension* and the *Journal of Clinical Hypertension* and printed in the June issue of *Journal of Cardiovascular Nursing*.

High blood pressure is notoriously difficult to treat to goal many patients fail to reach target levels despite treatment, and studies show home monitoring can help, said Thomas G. Pickering, M.D., D.Phil., chair of the statement writing group. Blood pressure measurement and tracking could be improved with home monitoring by the patients themselves, in much the way people with diabetes monitor their blood sugar levels with home glucose monitors.

He said there is strong evidence that the traditional way of measuring blood pressure in adults can be misleading. Studies indicate that between 10 percent and 20 percent of people diagnosed with high blood pressure in the doctor's office actually have the white coat effect, meaning that their pressures are normal under other conditions, but rise in the medical setting.

It is also believed that some people with normal blood pressures in their doctors offices have pressures that spike to potentially dangerous levels in other situations," said Pickering, director of the Center for Behavioral Cardiovascular Health at Columbia Presbyterian Medical Center in New York, N.Y.

According to the statement, home monitoring is particularly useful in the elderly, in whom both blood pressure variability and the white coat effect are increased, as well as in patients with diabetes, patients with kidney disease and in pregnant women.

Pickering noted that because everyone's blood pressure is highly variable during the day, taking one reading at a doctor's office every few months doesn't give a complete picture of a person's condition. Home monitors can take multiple measurements during each session, and can be used at different times of day. Many monitors also store and average blood pressure readings over time, providing crucial data for patients to take to their physicians so they can work as a team to diagnose and treat the condition. Many types of home monitors are relatively inexpensive at less than \$100.

Home blood pressure monitoring also gives patients the physiologic feedback they need to see regarding blood pressure, says Nancy Houston Miller, R.N., co-author and former president of the Preventive Cardiovascular Nurses Association. Rather than three to four office blood pressure checks per year, if they measure blood pressure at home in addition to following up with their healthcare provider, patients are likely to achieve goals more quickly and be confident that medicines are working for them. She also states that nurses and nurse practitioners have a significant role to play in interpreting data from blood pressure devices and educating patients about needed lifestyle interventions and medications.

We're encouraged by this joint statement on the value of home blood pressure monitoring and confident it will be helpful in reducing the incidence of heart attack, stroke and kidney disease, said Suzanne Oparil, M.D., president of the American Society of Hypertension.

Hypertension increases the risk of heart attack and stroke and controlling it is essential to reducing that risk. The statement writing group said home blood pressure monitoring is evidence-based healthcare that can improve the quality and lower the cost of caring for the 73 million people with hypertension.

Although earlier American Heart Association guidelines have included home monitors, this is the first statement to have detailed recommendations on their use.

- Patients should purchase oscillometric monitors with cuffs that fit on the upper arm. They should use a proper fitting cuff, and ask a healthcare provider the proper way to use the monitors.
- Wrist monitors are NOT recommended.

- Patients should take two or three readings at a time, one minute apart, while resting in a seated position. The arm should be supported, with the upper arm at heart level, and feet on the floor (back supported, legs uncrossed). It's important to take the readings at the same time each day, such as morning and evening, or as a healthcare professional recommends.
- Use of a home monitor can confirm suspected or newly diagnosed hypertension and rule out diagnosis for patients whose readings at the doctor's office don't reflect their actual pressures over time.
- Home monitoring can be used to evaluate the response to any type of antihypertensive treatment, and to motivate patients to take their medications regularly.
- The target goal for treatment with a home monitor is less than 135/85 millimeters of mercury (mmHg), or less than 130/80 in high-risk patients.

I hope this leads to a new era in patient-doctor partnerships," Pickering said. I think this is a very healthy trend and with a condition like high blood pressure, it really does depend on the patients remembering to change their lifestyles or remembering to take their pills.

Only a few of the home blood pressure devices on the market have been subjected to proper validation tests such as the Association for the Advancement of Medical Instrumentation (AAMI) and British Hypertension Society (BHS) protocols. Several devices have failed the tests. An up-to-date list of validated monitors is available on the BHS Web site, <http://www.bhsoc.org/default.stm>.

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