

New scientific statement on blood pressure measurement in people

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The accurate measurement of blood pressure is essential for the diagnosis and management of hypertension, a major risk factor for heart disease and stroke, according to an updated American Heart Association scientific statement on blood pressure measurement in humans, published in the American Heart Association journal *Hypertension*.

The statement, which updates a previous statement on the topic published in 2005, provides an overview of what is currently known about [blood pressure measurement](#), and supports recommendations in the 2017 American College of Cardiology/American Heart Association Guideline for the Prevention, Detection, Evaluation and Management of High Blood Pressure

The auscultatory method—where a healthcare provider uses a [blood pressure](#) cuff, a stethoscope and a mercury sphygmomanometer (device that measures blood [pressure](#)) - has been the gold standard for office blood pressure measurement for several decades. The mercury sphygmomanometer has a simple design and is

not subject to substantial variation across models made by different manufacturers. However, mercury devices are no longer being used due to environmental concerns about mercury.

"Many oscillometric devices, which use an electronic pressure sensor within the blood pressure cuff, have been validated (checked for accuracy) which allow for accurate blood pressure measurement in the healthcare office settings while reducing human errors associated with the auscultatory approach," said Paul Muntner, Ph.D., chair of the writing group for the scientific statement.

"Additionally, newer automated oscillometric devices can obtain multiple measurements with the single push of a button, which can be averaged to better estimate blood pressure," said Muntner, who is also a professor at the University of Alabama at Birmingham.

The statement also summarizes current knowledge about ambulatory blood pressure monitoring, which is done when a patient wears a device which measures their blood pressure throughout the day to identify white coat hypertension and masked hypertension.

Substantial data have been published since the last Scientific Statement in 2005 showing the importance of measuring blood pressure outside of the clinic setting. White coat hypertension, when blood pressure is raised in the healthcare office setting but not at other times and masked hypertension where blood pressure is normal in the healthcare office setting but raised at other times.

As detailed in the Scientific Statement, patients with white coat hypertension may not have an increased risk for cardiovascular disease and may not benefit from initiating antihypertensive medication. In contrast, patients with masked hypertension have a substantial increased risk for cardiovascular

disease.

The 2017 hypertension guideline also recommends conducting ambulatory blood pressure monitoring to screen for [white coat hypertension](#) and masked [hypertension](#) in clinical practice.

The American Heart Association continues to recommend patients measure their blood pressure at home using a [blood](#) pressure device with an upper arm cuff that has been checked for accuracy by a healthcare provider.

More information: *Hypertension* (2019). DOI: [10.1161/HYP.0000000000000087](https://doi.org/10.1161/HYP.0000000000000087) , www.ahajournals.org/doi/10.1161/HYP.0000000000000087

Provided by American Heart Association

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