

Not one but three readings in a single visit must for hypertension diagnosis: study

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New Delhi: A single blood pressure reading may result in the faulty diagnosis of high blood pressure and unnecessary prescription of medication. Instead, three readings during a single visit may help in the correct diagnosis of hypertension as well as low blood pressure, a new study has suggested.

This is because blood pressure varies with breathing patterns, emotion, exercise, meals, temperature, pain, etc., and a single reading may be affected by those factors and thus not give the correct picture. The researchers found that if a single reading was taken, as against three, about 63% more people or nearly two-thirds would be diagnosed as patients with high blood pressure requiring treatment.

The study recommends that in those persons with grade 1 or higher categories of high blood

pressure, three readings should be taken, with the mean of the second and third measurements being the clinical blood pressure. However, in patients with normal readings, one may be enough.

The conclusion is based on analysis of data from the National Family Health Survey (NFHS-4). The survey included data from men between 15–54 years and women between 15–49 years spread across all the districts in the country. The blood pressure of people participating was measured three times in the left upper arm, with at least 5 minutes between each measurement as well as 5 minutes of quiet sitting before the first measurement. A decrease in blood pressure was noted when the average of second and third readings were taken.

The study has important implications in detection and management lifestyle diseases by health workers in Health and Wellness Centers.

“As community health workers, ASHA workers or other rural health care coordinators are likely to measure blood pressure initially, protocol guidelines should emphasize the importance of measuring blood pressure thrice to prevent misdiagnosis and unnecessary commencement of hypertensive treatment in patients who only need to be encouraged to adopt a healthy lifestyle,” explained Dr Dorairaj Prabhakaran of Public Health Foundation of India, a member of the research team.

Measurement of blood pressure is done routinely and is considered to be a good way to determine a healthy or diseased heart as well as to predict future heart health-related issues. High blood pressure is a major risk factor for heart disease. As only half of those with high blood pressure are aware of their condition, it is in many ways considered a ‘silent killer’. Dr Ambuj Roy, another researcher from All India Institute of Medical Sciences, sums up the findings as “a minimum of three BP measurements in a single visit represents the health of your heart.”

The study results have been published in the *Journal of Human Hypertension*. The research team included Arun Pulikkottil Jose, Ashish Awasthi, Dimple Kondal, Dorairaj Prabhakaran (Public Health Foundation of India); Mudit Kapoor (Indian Statistical Institute, Delhi); Ambuj Roy (AIIMS, Delhi).

(India Science Wire)