

# Definition and Classification

## Definition

There is a continuous relationship between the level of blood pressure and the risk of complications. Starting at 115/75 mmHg, CVD risk doubles with each increment of 20/10 mm Hg throughout the blood pressure range.<sup>1,2</sup> All definitions of hypertension issued by various international authorities are arbitrary. There is some evidence that the risk of cardiovascular events in Asian Indians is higher at relatively lower levels of blood pressure (BP). In the absence of definite data from India, it would be prudent to maintain the same definition proposed in the first Indian guidelines on management of hypertension (2001).<sup>3</sup>

Hypertension in adults age 18 years and older is defined as systolic blood pressure (SBP) of 140 mm Hg or greater and/or diastolic blood pressure (DBP) of 90 mm Hg or greater or any level of blood pressure in patients taking antihypertensive medication.<sup>1,2</sup>

## Classification

The positive linear relationship between SBP and DBP and cardiovascular risk has long been recognized. This relationship is strong, continuous, graded, consistent, independent, predictive and etiologically significant for those with and without coronary

heart disease.<sup>4,5</sup> For persons over age 50, SBP is more important than DBP as a CVD risk factor.<sup>6</sup> SBP is more difficult to control than DBP.<sup>7,8</sup> SBP needs to be as aggressively controlled as DBP. Therefore, although classification of adult blood pressure is somewhat arbitrary, it is useful for clinicians who make treatment decisions based on a constellation of factors along with the actual level of blood pressure. Table 1 provides a classification of blood pressure for adults (age 18 and older).<sup>3,9</sup> This classification is for individuals who are not taking antihypertensive medication and who have no acute illness and is based on the average of two or more blood pressure readings taken at least on two subsequent occasions, one to three weeks apart, after the initial screening. When SBP and DBP fall into different categories, the higher category should be selected to classify the individual's blood pressure.

The term 'Prehypertension' introduced in the JNC VII guidelines includes a wide range of BP from normal to high normal. It is felt that the term "prehypertension"<sup>2</sup> is more likely to create anxiety in a large subset of population. Hence, we do not recommend the use of the term "pre-hypertension."<sup>9</sup> There is emerging evidence that the high normal group needs to be treated sometimes, in the presence of family history of hypertension and concomitant diseases like diabetes (TOD).<sup>10</sup>

**Table 1 : Classification of blood pressure for adults age 18 and older<sup>3,9</sup>**

Category	Systolic (mm Hg)		Diastolic (mm Hg)
Optimal**	<120	and	<80
Normal	<130	and	<85
High-normal	130-139	or	85-89
Hypertension***			
Stage 1	140-159	or	90-99
Stage 2	160-179	or	100-109
Stage 3	>180	or	>110
Isolated systolic hypertension			
Grade 1	140-159	and	<90
Grade 2	>160	and	<90

\*\*Not taking antihypertensive drugs and not acutely ill. In addition to classifying stages of hypertension on the basis of average blood pressure levels, clinicians should specify presence or absence of target organ disease and additional risk factors.

\*\*Optimal blood pressure with respect to cardiovascular risk is below 120/80 mm Hg. However unusually low readings should be evaluated for clinical significance.

\*\*\*Based on the average of two or more blood pressure readings taken at least on two visits after an initial screening.