Joint National Committee (JNC VIII) Prevention, Detection, Evaluation, and Treatment of High Blood Pressure Guidelines

BLOOD PRESSURE MEASUREMENT TECHNIQUES

- The electronic device, if available, is preferred because it provides more reproducible results.
- At the initial evaluation, BP should be measured in both arms; if the readings are different, the arm with the higher reading should be used for measurements thereafter.
- The BP should be taken after patients have emptied their bladders. Patients should be seated with their backs supported and with their legs resting on the ground and in the uncrossed position for 5 minutes. The patient's arm being used for the measurement should be at the same level as the heart, with the arm resting comfortably on a table.
- It is preferable to take 2 readings, 1 to 2 minutes apart, and use the average of these measurements.
- It is useful to also obtain standing blood pressures (usually after 1 minute and again after 3 minutes) to check for postural effects, particularly in older people.
- In general, the diagnosis of hypertension should be confirmed at an additional patient visit, usually 1 to 4 weeks after the first measurement. On both occasions, the SBP should be ≥140 mm Hg or the DBP ≥90 mmHg, or both, to make a diagnosis of hypertension.
- It can be helpful to measure BP at home. If available, the electronic device is simpler to use and is probably more reliable than the sphygmomanometer. The average of BPs measured over **5 to 7 days**, if possible in duplicate at each measurement, can be a useful guide for diagnostic and treatment decisions.
- If the BP is very high (for instance, a SBP ≥180 mm Hg), or if available resources are not adequate to permit a convenient second visit, the diagnosis and, if appropriate, treatment can be started after the first set of readings that demonstrate hypertension.

CLASSIFICATION OF BLOOD PRESSURE (BP)

CATEGORY	SBP mmHg		DPB mmHg
Normal	< 120	and	< 80
Prehypertension	120-139	or	80-89
Hypertension, Stage 1	140-159	or	90-99
Hypertension, Stage 2	≥ 160	or	≥ 100

DIAGNOSTIC WORKUP OF HYPERTENSION

- Assess risk factors and comorbidities
- Reveal identifiable causes of hypertension
- Assess presence of target organ damage
- Conduct history and physical examination
- **Obtain/review 12-lead ECG, RBS, FBC, UEC, TSH, Urinalysis for proteinuria, Lipid panel**
- Calculate the 10-year risk for first atherosclerotic cardiovascular disease events (ASCVD; nonfatal myocardial infarction, coronary heart disease–related death, or fatal or nonfatal stroke) with the **ASCVD Risk Estimator** - http://tools.acc.org/ASCVD-Risk-Estimator/

PRINCIPLES OF LIFESTYLE MODIFICATION

MODIFICATION	RECOMMENDATION	AVG. SBP REDUCTION RANGE[1]
Weight reduction	Maintain normal body weight (BMI 18.5-24.9 kg/m^2).	5-20 mmHg/10 kg
DASH eating plan	Adopt a diet rich in fruits, vegetables, and low-fat dairy products with reduced content of saturated and total fat.	8-14 mmHg
Dietary sodium reduction	No added salt. Use a limited amount of salt in cooking. Don't add salt to your food at the table.	2-8 mmHg
Aerobic physical activity	Regular aerobic physical activity (e.g. brisk walking) at least 30 minutes per day, most days of the week.	4-9 mmHg
Moderation of alcohol consumption	Men: limit to ≤ 2 drinks* per day. Women and lighter weight persons: limit to ≤ 1 drink* per day	2-4 mmHg

[1] Effects are dose and time dependent

* 1 drink = 15 mL ethanol (e.g. 355 mL beer, 148 mL wine, 44 mL 80-proof whiskey).