

Home Blood Pressure Monitoring (HBPM) For the Clinician

| Classification | | | |
|----------------------------------|----------------------------|---|-----------------------------|
| BP Classification | Systolic BP, mm Hg* | | Diastolic BP, mm Hg* |
| Normal | <120 | and | <80 |
| Prehypertension | 120-139 | or | 80-89 |
| Stage 1 hypertension | 140-159 | or | 90-99 |
| Stage 2 hypertension | ≥160 | or | ≥100 |
| Treatment Goals | | Goals for different disease states | |
| All hypertensives: <140/90 mm Hg | | Patients with diabetes: <130/80 mm Hg | |
| | | Patients with chronic kidney failure: <130/80 mm Hg | |

*Treatment determined by highest BP category.
Adapted from Chobanian AV, Bakris GL, Black HR, et al. The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure. The JNC 7 Report. *JAMA*. 2003;289:2561.

Benefits of Home Blood Pressure Monitoring (HBPM)

1. Rule out white-coat hypertension: elevated in office but may not be at home.
2. Confirm the diagnosis of hypertension.
3. Rule out masked hypertension; occurs when a patient's office BP is <140/90 mm Hg but ambulatory or home readings are in the hypertensive range (typically >135/85 mm Hg). It conveys the same cardiovascular risk as sustained hypertension.
4. Confirm the efficacy of pharmacotherapy.
5. Evaluate hypertension control.

Evaluating Need for Treatment of High Blood Pressure (BP)

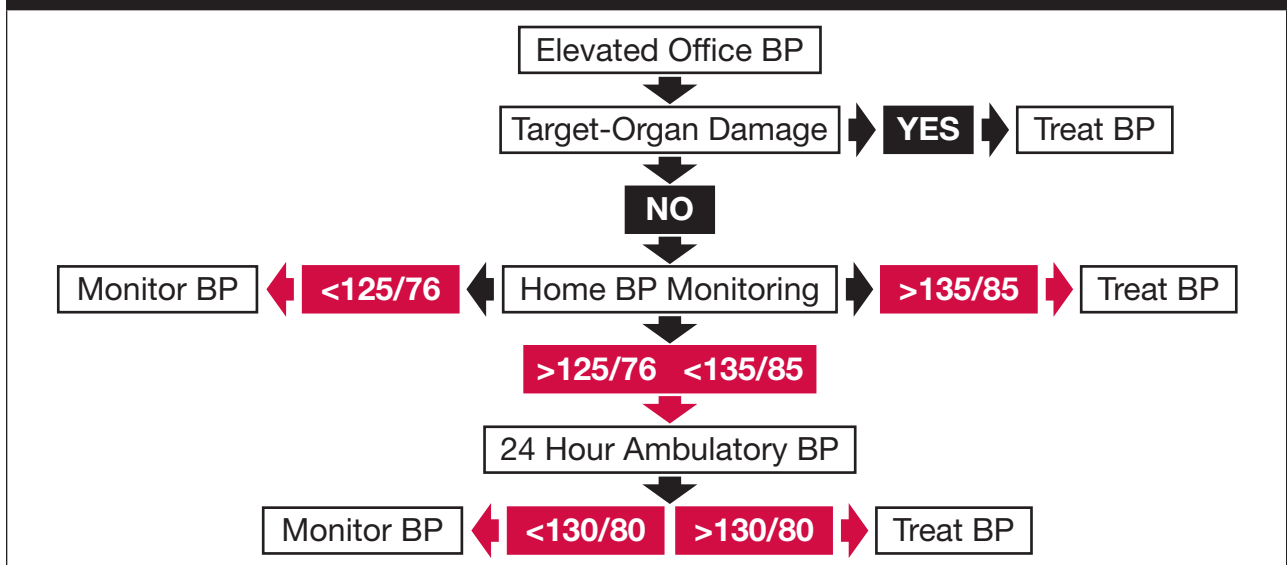


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Home Blood Pressure Monitoring (HBPM) For the Clinician *(cont)*

Frequency of Measurement

| | |
|------------------------------------|--|
| For initial use | Monitor over 7 days discarding 1st day. Measure BP 2-3 times before meds twice daily (am/pm)—average am and pm readings. |
| To assess treatment effects | Apply same technique as above and average BP readings after 2-4 weeks of monitoring. |
| Once controlled | Monitor 1 week per quarter as above. Recommend more frequent monitoring if adherence decreases or status changes. |

Monitors

| | |
|---------------|--|
| Arm | Monitors that measure the BP in the brachial artery are the most reliable and for the majority of patients, this is the preferred type of monitor. |
| Wrist | At present these devices have failed the validation studies and therefore are not recommended. |
| Finger | At present these devices have failed the validation studies and therefore are not recommended. |

Validated Home Blood Pressure Monitors

An up-to-date list of validated monitors is available on the Dabl Educational website (<http://www.dableducational.org>) and the British Hypertension Society website (<http://www.bhsoc.org/default.stm>)

Home measures > 135/85 mm Hg are generally considered hypertensive.

Number of Readings To Make a Clinical Decision

2 morning and 2 evening readings every day for 1 week but discard the readings of the first day, which gives a total of 12 readings on which to make clinical decisions. Patient education must include appropriate BP technique, checking validation of home devices including return demonstration, how to handle unusual readings, and BP reports.

Contraindications to HBPM

1. Patients who have atrial fibrillation or other arrhythmias such as frequent ectopic beats.
2. Patients who may become very anxious with elevated readings.

Adapted from:

Pickering T, Houston Miller N, Ogedegbe G, et al. Call to Action on Use and Reimbursement for Home Blood Pressure Monitoring. *J Clin Hypertens*. 2008;10:467-476.

Chobanian AV, Bakris GL, Black HR, et al. The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure. *Hypertension*. 2003;42(6):1206-1252.

Pickering T, Houston Miller N, Ogedegbe G, et al. Call to Action on Use and Reimbursement for Home Blood Pressure Monitoring A Joint Scientific Statement From the American Heart Association, American Society of Hypertension, and Preventive Cardiovascular Nurses Association. *J Card Nursing*. 2008;23(4):299-323.