

# Patient Self-Monitoring of Blood Pressure: A Provider's Guide

Patient self-monitoring of blood pressure is a valuable addition to the management of hypertension, supported by the Joint National Committee on Prevention, Detection, Evaluation and Treatment of High Blood Pressure (JNC-7), the American Heart Association and the American Society of Hypertension.

- Self-monitoring is especially useful for patients with poorly controlled hypertension.
- It can be used to titrate medications, improve control, and screen for white-coat hypertension.
- Home readings may be an equal or better predictor of cardiovascular risk and of target organ damage than office readings.
- Self-monitoring can enable and motivate patient participation in managing a condition that is often asymptomatic.

While self-monitoring can be done by most patients, it may be contraindicated for those with certain conditions: cardiac arrhythmias, and certain physical and mental disabilities. Because home monitors are not covered by most insurance plans, cost may be a barrier.

## INTRODUCING SELF-MONITORING TO YOUR PATIENT

**1. Explain the value of the home monitor in controlling high blood pressure. Encourage patients to “know their numbers,” and describe what the numbers mean.**

**2. Provide guidance on selecting a monitor.** Recommend:

- A validated monitor only. For a list, see:  
[http://www.dableducational.org/sphygmomanometers/devices\\_2\\_sbpm.html#UpperArm](http://www.dableducational.org/sphygmomanometers/devices_2_sbpm.html#UpperArm)
- A brachial cuff model. Wrist and finger models are often used incorrectly.
- A monitor with a fully automated – rather than a manual – inflation cuff.
- An appropriate sized cuff. (Standard adult cuffs are too small for about a third of patients.)
- Models equipped with printers or memory may improve reliability in record keeping, though they are also more expensive.

**3. Validate the monitor.**

Ask your patient to bring it in so you can check it against your office equipment. After that, check for accuracy about every 6 months (or per monitor instructions) and/or if faulty readings are suspected.

**4. Teach patients proper techniques.**

- Rest 5 minutes before taking your blood pressure.
- Don't smoke or drink caffeinated beverages for at least 30 minutes before.
- Take your blood pressure before (not after) you eat.
- Sit comfortably with your back supported and both feet on the floor (don't cross your legs).
- Elevate your arm to heart level on a table or a desk.
- Use the proper sized cuff. It should fit smoothly and snugly around your bare upper arm. There should be enough room to slip a fingertip under the cuff. The bottom edge of the cuff should be 1 inch above the crease of the elbow.
- Ideally, take 3 measurements at one sitting and record the average.

**5. Provide self-blood pressure monitoring tools for patients to easily keep track of their numbers at home.**

## PRESCRIBE SELF-MONITORING FREQUENCY

Initially, blood pressure measurements should be taken in the morning and evening for 3-4 consecutive days. Disregard the first day when averaging outpatient readings. Home blood pressures are generally lower than office pressures (mean 8/6 mmHg lower).

## RECOMMENDED PROTOCOL

CIRCUMSTANCE	MONITORING FREQUENCY/DURATION
<b>Titration Medication</b>	<ul style="list-style-type: none"> <li>• Titrate medication until mean out-of-office blood pressure levels are below 135/85.</li> <li>• To assess peaks and troughs, compare morning and evening readings to those obtained 3-4 hours after medication is taken.</li> </ul>
<b>Self-Management Tool to Enhance Medication Adherence and to Improve and Maintain Control of High Blood Pressure</b>	<ul style="list-style-type: none"> <li>• Emphasize patient education.</li> <li>• Adjust frequency of monitoring to complement patient self-management goals (could vary from once a day to once a week).</li> <li>• Encourage the recording of lifestyle changes and their observed impact on pressure (e.g., increased or decreased salt intake).</li> </ul>
<b>Screen for White-Coat Hypertension</b>	<ul style="list-style-type: none"> <li>• Measurements should be taken in the morning and evening until next visit (2-4 weeks).</li> <li>• If no evidence of target organ damage and mean is below 130/80, medication may not be necessary.</li> <li>• Some guidelines recommend confirmation with ambulatory blood pressure monitoring.</li> </ul>

- **Make sure your patients know how to respond to an emergency.**
  - Ensure that patients know to call 911 immediately if they have signs or symptoms of a heart attack or stroke.
  - Advise patients what to do in case of an exceptionally high or low reading.
- **Create office systems to easily integrate home blood pressure monitoring into your practice.**
  - Identify a support staff member who can teach patients how to use monitors, validate devices, and review action plans and blood pressure logs.
  - Develop a protocol to address frequency of office visits, handle inquiries from patients about home monitor concerns, etc.
  - Consider organizing hypertension support groups for your patients or using peer educators to teach patients how to measure blood pressure at home.

## TOOLS FOR PATIENT SELF-MONITORING OF BLOOD PRESSURE

- **Keep Your Heart Healthy: Blood Pressure Tracking Card**
- **Health Bulletin #30: Healthy Heart - Blood Pressure**

**To order these patient tools for your office, call 311.**

