

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

- **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.**

