

# Guide to Accurate In-Office Blood Pressure Measurement

## Key steps for proper blood pressure (BP) measurements

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### Step 1: Properly prepare the patient

1. Have the patient relax, sitting in a chair (feet on floor, back supported) for > 5 minutes.
2. The patient should avoid caffeine, exercise, and smoking for at least 30 minutes before measurement.
3. Ensure the patient has emptied their bladder.
4. Neither the patient nor the observer should talk during the rest period or during the measurement.
5. Remove all clothing covering the location of the cuff placement.
6. Measurements made while the patient is sitting or lying on an examining table do not fulfill these criteria.

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### Step 2: Use proper technique for BP measurements

1. Use a BP measurement device that has been validated, and ensure that the device is calibrated periodically.
2. Support the patient's arm (e.g., resting on a desk).
3. Position the middle of the cuff on the patient's upper arm at the level of the right atrium (the midpoint of the sternum).
4. Use the correct cuff size, such that the bladder encircles 75-100% of the arm, and note if a larger- or smaller-than-normal cuff size is used.
5. Either the stethoscope diaphragm or bell may be used for auscultatory readings.

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### Step 3: Take the proper measurements needed for diagnosis and treatment of elevated BP/hypertension

1. At the first visit, record BP in both arms. Use the arm that gives the higher reading for subsequent readings.
2. Separate repeated measurements by 1-2 minutes.
3. For auscultatory determinations, use a palpated estimate of radial pulse obliteration pressure to estimate Systolic Blood Pressure (SBP). Inflate the cuff 20-30 mmHg above this level for an auscultatory determination of the BP level.
4. For auscultatory readings, deflate the cuff pressure 2 mmHg per second, and listen for Korotkoff sounds.

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### Step 4: Properly document accurate BP readings

1. Record SBP and Diastolic Blood Pressure (DBP). If using the auscultatory technique, record SBP and DBP as onset of first Korotkoff sound and disappearance of all Korotkoff sounds, respectively, using the nearest even number.
2. Note the time of most recent BP medication taken before measurements.

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### Step 5: Average the readings

- Use an average of  $\geq 2$  readings obtained on  $\geq 2$  occasions to estimate the individual's level of BP.

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### Step 6: Provide BP readings to patient

- Provide patients the SBP/DBP readings both verbally and in writing.

#### Reference

Muntner P, Shimbo D, Carey RM, et al. Measurement of blood pressure in humans: a scientific statement from the American Heart Association. Hypertension. 2019 May;73(5):e35-e66. doi: 10.1161/HYP.0000000000000087.

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