

## Automated blood pressure measurement to screen & confirm BP

### What is *automated blood pressure measurement*?

Measuring blood pressure with an automated device (e.g., the Omron HEM-907XL)

### Why is *automated blood pressure measurement* important?

Automated blood pressure measurement devices are highly accurate and are often more reliable than people for checking blood pressure. However, you still must use the proper technique to get accurate readings.



Omron HEM-907XL

### When do we use *automated blood pressure measurement*?

An automated device should be used in most situations in which you measure blood pressure; exceptions are discussed in Fast Facts #4.

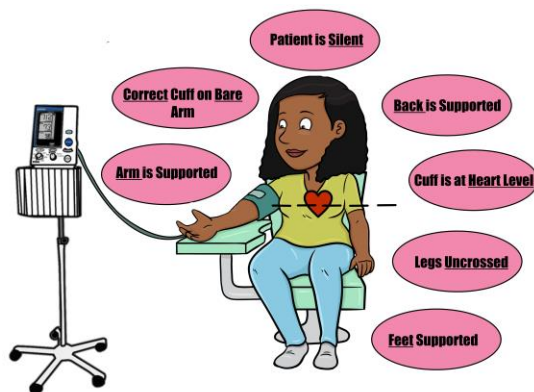
### How should we perform *automated blood pressure measurement*?

The technique used for obtaining automated blood pressure measurements will vary depending on whether you want to get a *screening* BP or a *confirmatory* BP. Although these steps work with other automated devices, this handout describes how to get automated readings with the Omron HEM-907XL

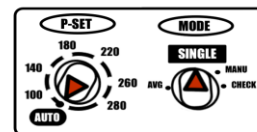
To get an automated **screening** blood pressure

1. Prepare your patient just like you would for any other blood pressure measurement:

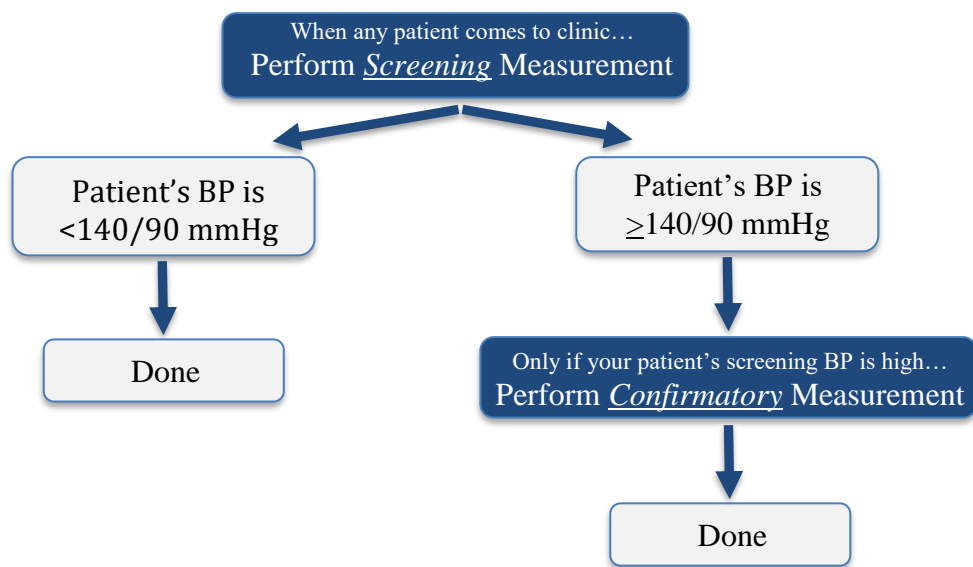
- Seated quietly
- Back supported
- Correct cuff size on bare upper arm
- Arm supported
- Cuff at heart level
- Legs uncrossed
- Feet supported



2. Turn the Omron HEM-907XL on by pressing the ON/OFF button
3. Make sure the P-SET dial is set to AUTO
4. Make sure the MODE dial is set to SINGLE
5. Press the START button
6. The cuff will begin to inflate immediately. When the Omron device is done, your patient's blood pressure reading will display on the screen. Record this number as the *screening* blood pressure reading.

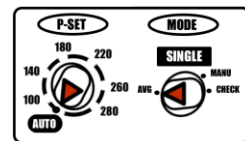


If your patient's first (i.e., *screening*) blood pressure is less than 140/90 mmHg, you are done! However, if the *screening* blood pressure is 140/90 mmHg or higher, you should obtain a *confirmatory* blood pressure measurement before the patient's office visit ends:



To get an automated **confirmatory** blood pressure reading

1. Let the patient know that you want to measure their blood pressure more precisely, and that this requires them to sit quietly for a total of ~10 minutes.
2. Ask your patient if they need to empty their bladder – if they do, let them void.
3. Prepare your patient just like you would for any other blood pressure measurement:
  - Seated quietly
  - Back supported
  - Correct cuff size on bare upper arm
  - Arm supported
  - Cuff at heart level
  - Legs uncrossed
  - Feet supported
4. Turn the Omron HEM-907XL on by pressing the ON/OFF button
5. Make sure the P-SET dial is set to AUTO
6. Make sure the MODE dial is set to AVG
7. Press the START button
8. The cuff will count down a timer for 5 minutes before automatically beginning to inflate the cuff. The cuff will inflate and deflate three times in a row with 30 seconds between each cycle. (Your patient should rest quietly the entire time, even when the timer counts down.)
9. At the end of three inflation/deflation cycles, the Omron HEM-907XL will display the average of all three blood pressure readings. Record the average value in the chart as the patient's *confirmatory* blood pressure reading. Do not erase the screening BP reading!



### For more information

- Ostchega, Y., et al. (2010). "Assessing the validity of the Omron HEM-907XL oscillometric blood pressure measurement device in a National Survey environment." *J Clin Hypertens (Greenwich)* **12**(1): 22-28.
- Ostchega, Y., et al. (2012). "Blood pressure randomized methodology study comparing automatic oscillometric and mercury sphygmomanometer devices: National Health and Nutrition Examination Survey, 2009-2010." *Natl Health Stat Report*(59): 1-15.

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