

Managing Blood Pressure: It Takes a Team



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Module Two **How to Take Blood Pressure**

October 2011

MODULE TWO:

How to Take Blood Pressure



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Module Two: *HOW TO TAKE BLOOD PRESSURE*

Objectives

- Demonstrate proper technique when measuring blood pressure using a sphygmomanometer & stethoscope and/or an electronic BP home monitoring device.
- Demonstrate the ability to report and document BP according to agency policy and procedure.

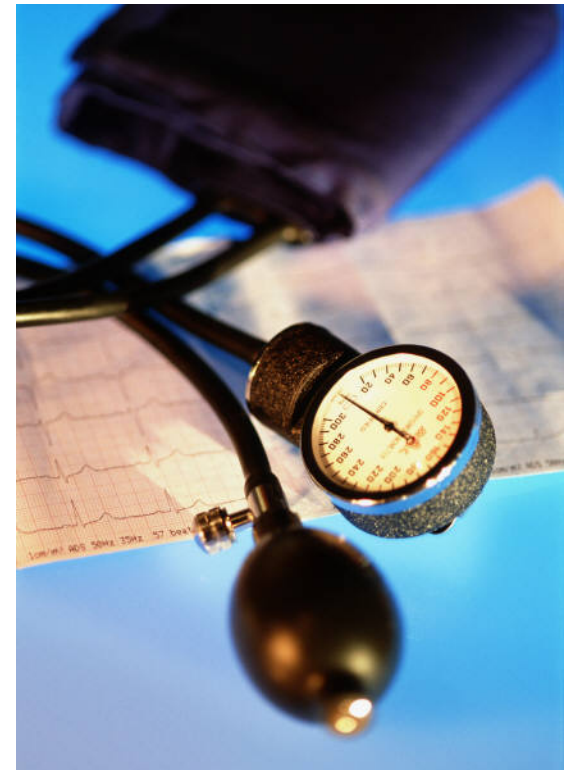
Note: Where the word 'patient' is used, it is also intended to represent 'client' and 'resident'.

Types of Sphygmomanometer

1. Aneroid – round dial and needle
2. Electronic - most common

Note: Mercury sphygmomanometers have been banned.

Note: Ensure you have the correct cuff size for the patient.



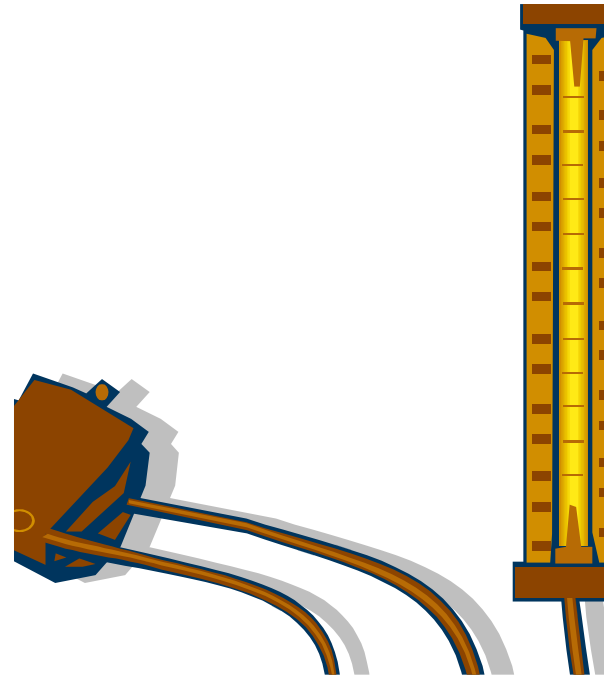
Aneroid Manometer

- The round dial displays the needle which will point to the numbers relative to the blood pressure.



Mercury Manometer

- May be wall mounted or portable - not used as often.
- The mercury in the calibrated column will indicate the blood pressure reading
- Mercury manometers have now been banned



Electronic Manometer

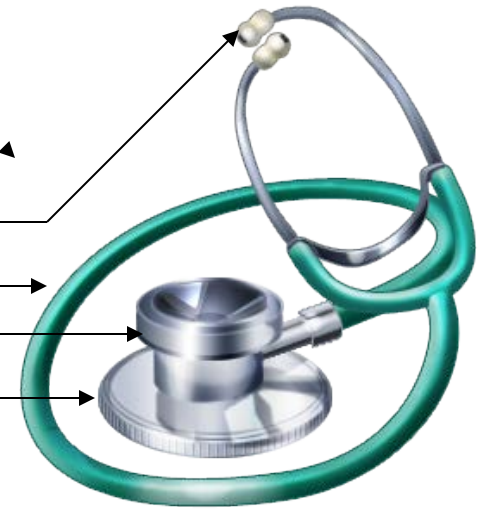
- All automatic with push of button after cuff applied to arm.
- Displays pulse.
- Very common in facilities and private homes.



Stethoscope

There are four parts to a stethoscope

- earpiece _____
- tube _____
- bell _____
- diaphragm _____



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The **diaphragm** is used for detecting the brachial pulse because it has larger area so covers more surface area. This provides a better 'pick up' of the brachial pulsation sounds.

The **bell** of the stethoscope is best used to detect low tone sounds.

Pre Procedure Checklist

- Know the policy and procedure for your facility
- Collect the equipment ensuring that cuff is appropriate size for patient
- Identify yourself
- Identify the patient
- Explain the procedure
- Perform hand hygiene
- Provide privacy



Stethoscope



- Wipe earpieces and diaphragm with an antiseptic wipe.
- Place the earpieces in your ears so they point forward.
- Warm diaphragm in your hand.
- Don't let anything touch tubing as it may interfere with sound accuracy.
- Clean after each use with an antiseptic wipe.

Positioning the Patient



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- If measuring a set of vital signs (i.e. TPR and BP), the BP should be measured last to get a more accurate measurement
- First, have patient rest for 5 minutes
- Position patient seated with feet flat on the floor and legs uncrossed or have patient in supine position
- Position and support the patient's arm so that it is level with their heart and the palm facing up.
- Locate the brachial artery

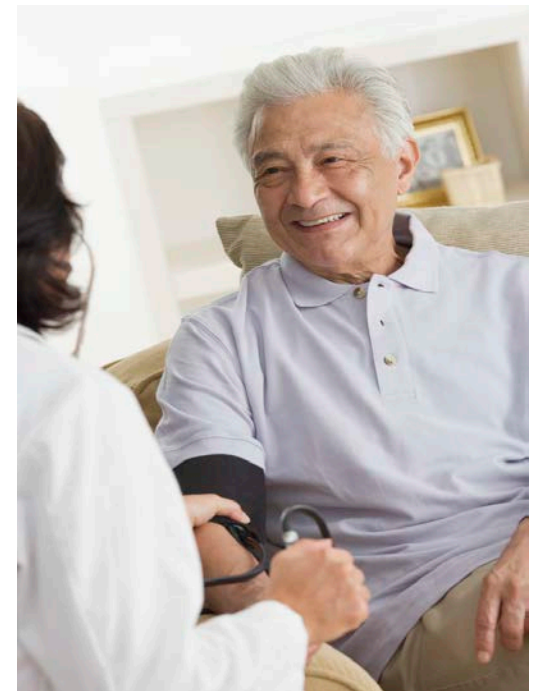
Locating Brachial Artery

- Place two fingers over the bend in an elbow (the antecubital fossa) and feel for a pulse under your fingers.
- This is where you will place the diaphragm of the stethoscope.



Placement of the Blood Pressure Cuff

- Ensure that the cuff is the correct size (e.g. may need a larger cuff for an obese patient. A regular size cuff will produce a higher than normal BP result).
- Apply the cuff in the middle third of the upper arm with the 'tubes' over the inner arm
- When using a BP cuff with a dial-type measurement, make sure the dial is set at 0 before proceeding.



Placement of the Blood Pressure Cuff

There is usually an arrow or circular marking on the cuff that should be in alignment with the brachial pulse when positioning and securing the cuff in the middle third of the upper arm.



Positioning the Cuff

Which of the Following is the Correct Position?



Positioning the Cuff

Which of the Following is the Correct Position?

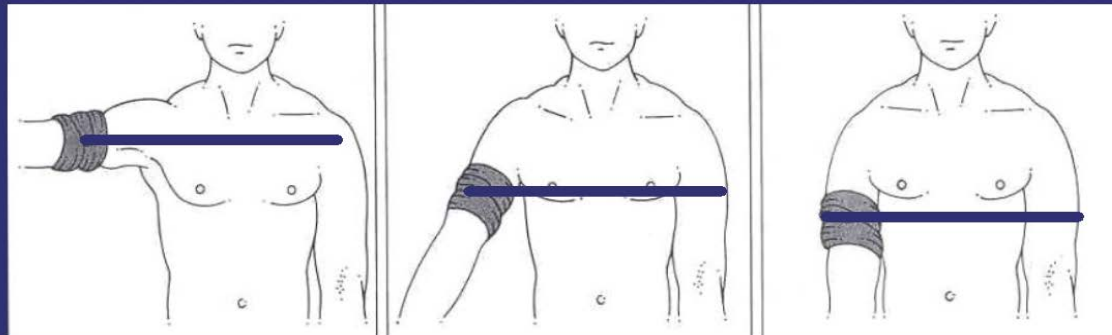


Positioned at heart level



Positioning the Cuff

Which of the Following is the Correct Position?



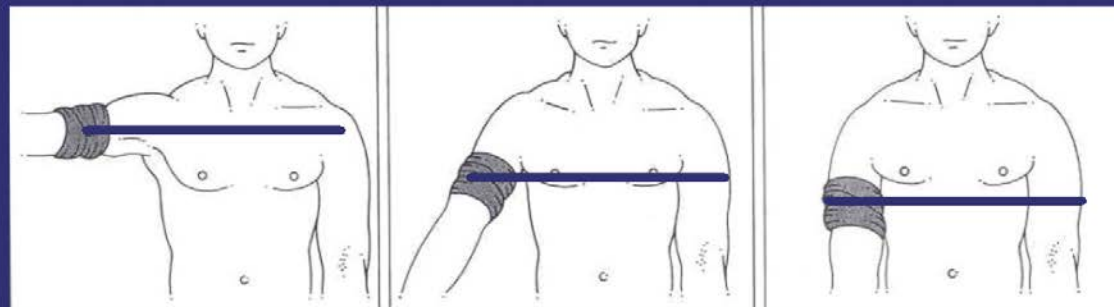
115/73 mmHg

120/78 mmHg

126/84 mmHg

Positioning the Cuff

Which of the Following is the Correct Position?



115/73 mmHg

120/78 mmHg

126/84 mmHg



The BP measurement will increase from left to right as the arm is lowered below heart level

Pulse Occlusion Check

- If new to BP sounds, the pulse occlusion check is important as it will sensitize your ear to the systolic and diastolic sounds.
- If the patient has an arrhythmia (irregular pulse), the start point determination is particularly important
- Using a radial pulse may be helpful if you are having difficulty finding the brachial pulse



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Pulse Occlusion Check

- With fingers over the brachial or radial artery be sure you can feel the pulse.
- Inflate the cuff until you cannot feel the pulse, and note this point. Add 30 mmHg beyond as your **start point**.
- Determining the pulse occlusion point prevents over inflation of the cuff and therefore reduces the potential for a false high or missed systolic beat
- Deflate the cuff, wait 30 seconds before continuing.



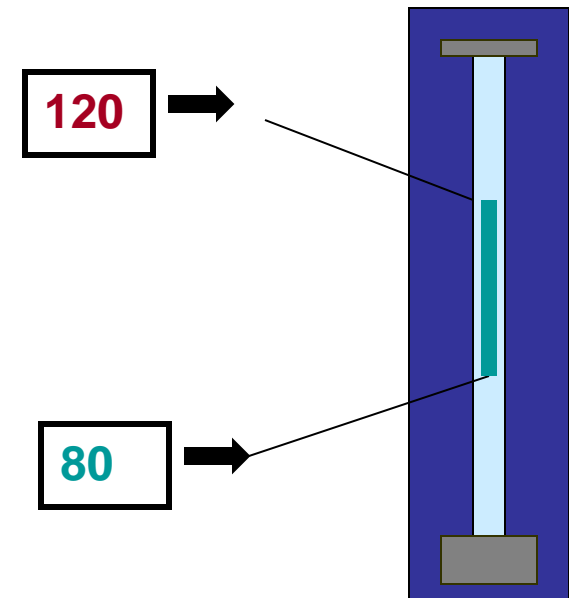
Manual Blood Pressure

- With the diaphragm of stethoscope over the brachial artery, inflate the cuff to **start point**.
- Slowly deflate the cuff at a rate of 2 – 4 mmHg per second, listening for the first beat and note this number (systolic reading).
- Then continue deflating the cuff until the sound disappears and note this number (diastolic reading).
- After noting the BP reading, deflate the cuff immediately and completely remove it to avoid prolonged pressure on the blood vessels in the arm.



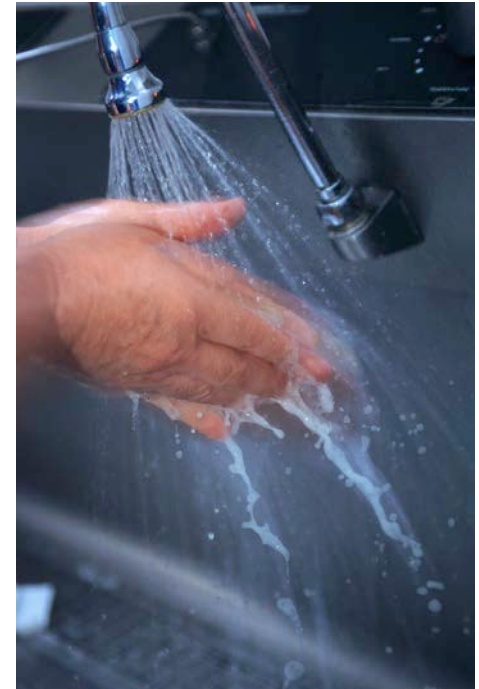
What Do The Numbers Mean?

- Example: 120/80 mmHg
- The upper number is when the heart contracts = **systolic pressure**
- The lower number is when the heart relaxes = **diastolic pressure**



After You Complete Taking The Blood Pressure

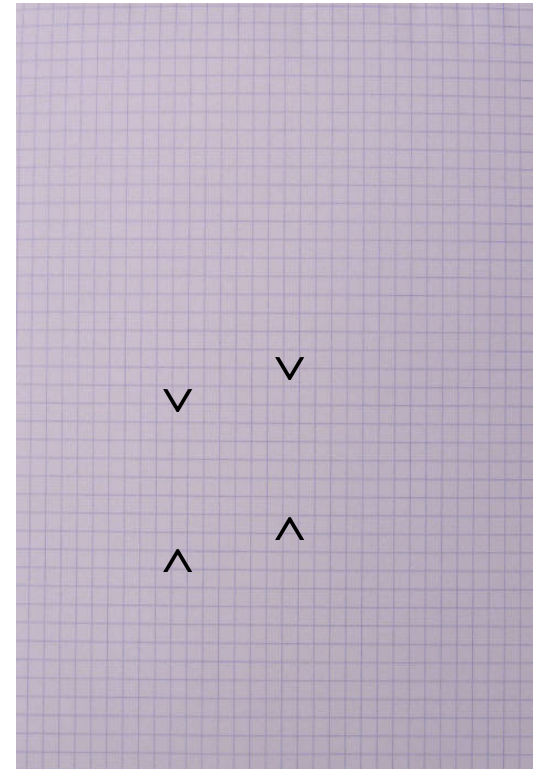
- Provide comfort
- Place the call bell in reach
- Clean and return the BP equipment
- Perform hand hygiene
- Document and report your findings



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Documentation

- Always follow your facility's policies and procedures for documentation
- Symbols may be used when documenting such as \wedge or \vee
- Often a graphic record will be used to record blood pressure





Cautions When Measuring Blood Pressure

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DO NOT take blood pressure on the:

- same side as a mastectomy
- arm with any type of tube or fistula
- paralyzed limb

Note: If blood pressure readings differ between arms, always take the blood pressure on the arm that gives the higher reading.



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Must Do's When Taking Blood Pressure

- ☑ Check that your facility allows you to perform this procedure.
- ☑ Follow your facility's policies and procedures
- ☑ Have proper training.
- ☑ Be accurate - inaccurate measurement may cause harm.
- ☑ Ensure equipment is calibrated regularly
- ☑ Immediately notify the nurse if you have any concerns about the blood pressure reading.

MEASUREMENT ERRORS

Identify 5 (or More) Measurement Errors



With permission: Vanasse A. Module d'autoformation # 17, l'Hypertension.



MEASUREMENT ERRORS

Measurement Errors	Other Factors That Affect BP Measurement
<ol style="list-style-type: none">1. Excessive noise2. Stimulating environment3. Standing not resting4. Cuff positioned over coat5. Hear through coat6. Position of cuff7. Talking can increase diastolic and systolic BP by about 6-7 mmHg	<ol style="list-style-type: none">1. Heavy physical exercise2. Pain, stress, anxiety3. Changes in temperature4. Distended bladder or bowel5. Eating6. Smoking and or caffeine consumption7. Medications

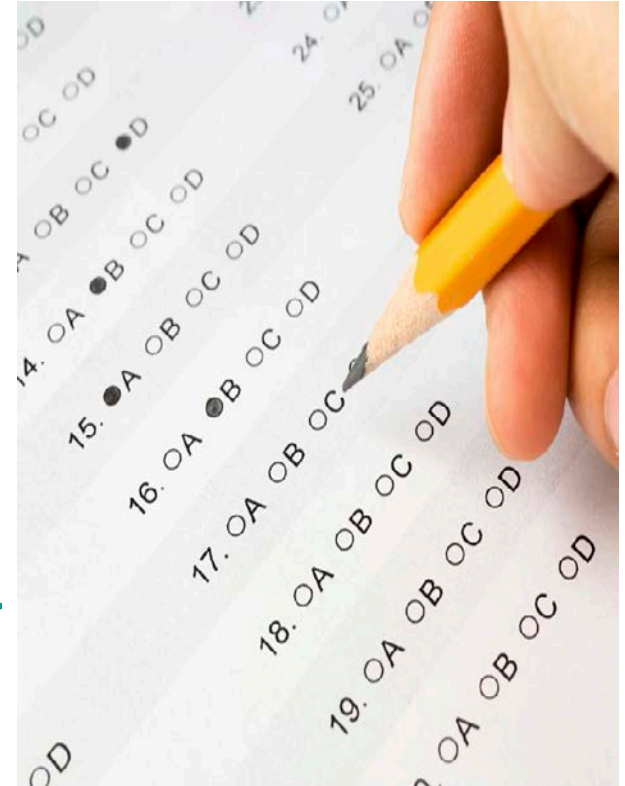
TIME TO PRACTICE



YOUR FEEDBACK

- Please take 5 minutes to complete an evaluation of this Blood Pressure Module by clicking on the link below:

<http://www.surveymonkey.com/s/BPModuleTwo>



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