Arterial Blood Pressure Measurement by Auscultation



• Preparing for the procedure

- a. Inform patient, gain consent and explain procedure to patient.
- **b.** Position at rest.
- c. Expose upper limb.
- **d.** Ensure arm at level of heart.



Performing the procedure (Measuring systolic pressure)

- a. Place cuff on arm, 2.5cm (if possible) above elbow.
- **b.** Observe index markings on the cuff to that the patient's arm circumference falls within the recommended range. If not, choose the appropriate smaller or larger cuff.
- c. Align artery marker on the cuff over the brachial artery.
- d. Wrap cuff firmly around arm.
- e. Secure cuff firmly into position with Velcro or clip.
- f. Locate radial pulse.
- q. Close screw valve and inflate cuff.
- h. Note when pulse is lost and inflate a further 20mmHg.
- i. Gradually deflate cuff by opening screw valve. Aim to deflate at approximately 2 mmHg/second.
- i. Note pressure when radial pulse is again felt.
- k. Fully deflate cuff, but leave in position.



Performing the procedure (Measuring diastolic pressure)

- **a.** Place stethoscope ear pieces into ear, facing forward in the ear canal.
- **b.** Ensure stethoscope chest piece is set to listen through the diaphragm.
- **c.** Turn patient's arm to expose anterior aspect.
- **d.** Palpate brachial artery in cubital fossa and place diaphragm of stethoscope over artery.
- **e.** Close screw valve and inflate cuff 10–20mmHg above systolic pressure just measured. Slowly deflate cuff by gently unscrewing valve. Note systolic pressure (Korotkoff 1: first return of sound). Note diastolic pressure (Korotkoff 4 or 5: when sound disappears).
- f. Completely deflate cuff.
- **g.** Remove cuff do not squeeze cuff to remove air. Squeezing may damage the sensitive gauge.
- **h.** Roll down sleeve or replace clothing as required.



4 Documentation

a. Record to nearest 5mmHg.



Background

Arterial Blood pressure (BP) is recorded to assess the patient's haemodynamic health status. Health practitioners are expected to be competent in obtaining and recording an accurate manual blood pressure. The appropriate size of cuff is fundamental when obtaining an accurate reading, the cuff should be placed at the level of the heart when obtaining a correct reading.

Equipment required

- Sphygmomanometer
- Stethescope
- Hand sanitiser



References

Beevers G, Lip GYH, O'Brien E. ABC of hypertension. Blood pressure measurement: Part I - Sphygmomanometry: factors common to all techniques" BMJ. 2001;322(7293): 981–85.

Graves JW, Bailey KR, Sheps SG. The changing distribution of arm circumferences in NHANES III and NHANES 2000 and its impact on the utility of the 'standard adult' blood pressure cuff. Blood Pressure Monitoring. 2004;8(6):223–227.

Schneller L-E. Observations and vital signs [Consumer Information Sheet on the Internet]. Adelaide: Joanna Briggs Institute; 2010 [updated 2012 July 1; cited 2014 July 31]. Available from: JBI Connect+.

Tollefson J. Clinical Psychomotor Skills: Assessment Tools for Nursing Students. 5th ed. Melbourne: Cengage Learning Australia; 2012.

Wisconsin Department of Health Services Division of Public Health. Wisconsin Heart Disease and Stroke Prevention (ND) Program. Blood Pressure Measurement Toolkit: Improving Accuracy, Enhancing Care [Internet]. [cited 2014 July 31]. Available from: http://www.dhs.wisconsin.gov/publications/p0/p0062 3.pdf

Please visit the website for more videos and additional information.



http://expertinmypocket.com.au

Support for this project has been provided by the Australian Government Office for Learning and Teaching.









