

Examination of the Vital Signs

Wash your hands & Introduce the exam to your patient

Positioning & Draping

- Have the patient seated or supine with both arms fully exposed

Pulse

- palpate the radial artery with the pads of your index and middle fingers
- count the number of beats within 30 seconds
- multiply this value by 2 to calculate the patient's heart rate in beats per minute (bpm)
- <40 bpm = bradycardia, >100 bpm = tachycardia

Respiratory Rate

- observe the patient and count the number of breaths they take in 30 seconds
- multiply this value by 2 to calculate the patient's respiratory rate
- the normal respiratory rate is ~20 breaths/min (range: 16-25)
 - **NB:** this is best done without telling the patient to breath normally! Telling patients to breath normally often causes them to concentrate on their breathing, thus making them breath abnormally.

Blood Pressure

- have the patient rest in the seated or supine position for 5 minutes
- ask if they have recently smoked a cigarette as this could distort their blood pressure measurement
- palpate the brachial artery at the level of the antecubital fossa to ensure it is in the anatomically correct position
- select the appropriate cuff size. The width of the cuff should be >40% of the circumference of the patient's upper arm.

- position the cuff ~1 cm above the antecubital fossa with the arrow over the patient's brachial artery
- support arm so that the antecubital fossa is at heart level
- while palpating the radial pulse, inflate the cuff rapidly until the radial pulse disappears
- reduce the pressure of the cuff at ~2mmHg/sec until the radial pulse reappears. Note this value.
- let the patient rest for 1 minute
- to exclude the possibility of an auscultatory gap, inflate the cuff rapidly to 30 mmHg above the level of disappearance of the radial pulse
- place your stethoscope over the brachial artery
- reduce the pressure of the cuff at ~2mmHg/sec
 - the appearance of sound is the systolic blood pressure (SBP)
 - the complete disappearance of sound is the diastolic blood pressure (DBP)
- 2 blood pressure measurements should be taken from the same arm, at least 30 seconds apart. The average of the measurements is the patient's blood pressure.
- blood pressure measurements should be taken for both arms and, in certain situations, compared to leg blood pressure.
- blood pressure should be reported as 'SBP over DBP'.
(eg) 120 over 80.

Temperature

- temperature can be measured using the oral cavity, rectum, axilla, or tympanic membrane
- when reporting/recording the patient's temperature, be sure to include the location where the temperature was measured.
(ie) "37.5°C, taken orally".