

CLINICAL SKILLS: HOW TO TAKE AN ARTERIAL BLOOD GAS

- Wash hands
- Introduce self
- Check patient name and details with patient and on their wrist band
- Ask for the patient's permission to take a blood sample; explain that this is different from taking a normal blood sample, as instead of being taken from a vein it is taken from an artery. You may want to add that this may be a little more painful.

- Gather your equipment
 - Tray (clean from inside-out using a sterile wipe)
 - Gloves
 - Arterial blood gas needle and syringe (if the syringe has heparin in it then you should 'prime' the needle by squirting the heparin out after attaching the needle)
 - Tape and cotton wool/gauze
 - Alcohol swab
- Reposition patient's forearm so the palm is facing you. Use a pillow if this helps with positioning.
- Inspect
 - If the patient has a monitor on, note saturations. Note if the patient is on oxygen, and if so how much and what delivery device is being used
 - Note if hand looks well perfused
- Palpate
 - Allen's test: choose arm to be sampled from (preferably non-dominant hand). Put pressure on ulnar and radial arteries at the wrist using both of your thumbs. Ask patient to squeeze and release hand. Watch the palm become white. Then release pressure from the ulnar artery and check that the hand becomes pink. If it does, this suggests that the hand has adequate blood supply from the ulnar artery. It is therefore acceptable to sample the radial artery. (Another important use of Allen's test is before creation of a dialysis arterio-venous fistula in the forearm)
 - Now palpate the radial artery alone, and try to find where you can feel it the strongest
 - Don gloves and wipe the area clean with a sterile wipe
- Taking the sample
 - Keep the wrist in slight extension
 - Ensure the needle is bevel up
 - Warn of a sharp scratch
 - Whilst feeling for the radial artery with one finger (held just proximally of where you are planning to insert the needle - beware of needstick risk!), carefully insert the needle
- Allow the syringe to fill with blood
 - If you are in the artery, the syringe should fill in a pulsatile manner, at a moderately fast pace, and be a deep red colour
- Once filled sufficiently (>3mls), remove the needle rapidly apply pressure over the area for **3 minutes** using the cotton wool and then attach with tape
- Dispose of sharp in sharps bin

- Thank patient
- Record the patient details and details of any supplementary oxygen that they are receiving
- Explain that you would now take the sample to an arterial blood gas machine for analysis.