

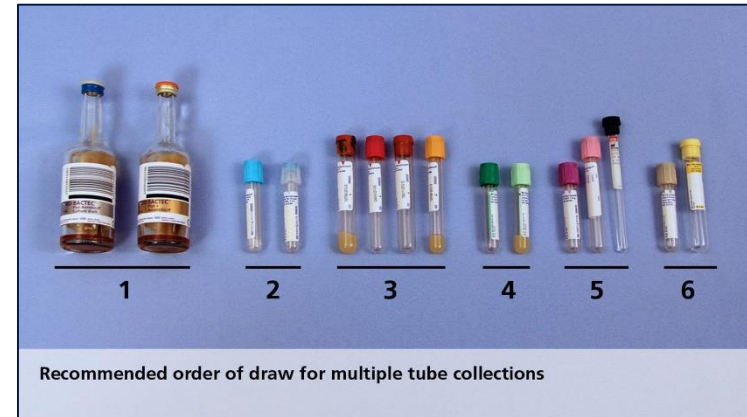
# Phlebotomy Basics

1. **Gather Supplies** (*appropriate tubes, gloves, alcohol swabs, gauze, tourniquet, blood-sampling device [safety-engineered devices or needles/syringes, biohazard bag]*)
2. **Identify and Prepare Patient** (*confirm patient with patient identifiers and explain procedure*)
3. **Select Site for Specimen Collection** (*antecubital is most common site for blood collection*)
4. **Perform hand hygiene and put on gloves**
5. **Disinfect site** (*Unless drawing blood cultures, or prepping for a blood collection, clean the site with a 70% alcohol swab and allow to dry completely*)
6. **Blood Collection**
  - Apply the tourniquet 2–4 inches (5–10 cm) proximal to/above the insertion site using a quick-release knot
  - Anchor the vein with non-dominant hand by holding the patient's arm and placing a thumb just below the venipuncture site.
  - Ask patient to form a fist to make veins more noticeable.
  - Enter the vein swiftly at a 30 degree angle or less, and continue to introduce the needle along the vein at the easiest angle of entry.
  - Once sufficient blood has been collected, release the tourniquet before withdrawing the needle. Some guidelines suggest removing the tourniquet as soon as blood flow is established, and always before it has been in place for two minutes or more.
  - Withdraw the needle gently and apply gentle pressure to the site with a clean gauze or dry cotton-wool ball. Ask the patient to hold the gauze or cotton wool in place, with the arm extended and raised. Ask the patient NOT to bend the arm, because doing so causes a hematoma.
7. **Fill Sample Tubes in Correct Order** (*see other page*)
8. **Clean Surfaces and Complete Patient Procedure** (*Check the label and forms for accuracy.*)
9. **Prepare for Transporting Samples** (*Pack laboratory samples safely in a plastic leak-proof bag with an outside compartment for the laboratory request form. Placing the requisition on the outside helps avoid contamination.*)
10. **Clean Spills of Blood or Body Fluids**

# Tube Collection: Recommended Order

To avoid cross-contamination of additives in each tube, a specific order of lab collection is recommended. Once obtained, gently mix the specimen by inverting 5 – 10 times.

Color	Tests Frequently Associated with Tube Color
Varies	Aerobic/Anaerobic
Blue	PT, PTT, INR, ACT, Fibrinogen, D-Dimer, Clotting Factors
Red, Gold	Standard Chemistries, Therapeutic Drug Levels, Serum Testing, BMP, CMP, Lipids, CPK, Pregnancy, Thyroid
Green	Sometimes used for standard chemistry, whole blood and plasma testing, troponin, and ammonia (on ice)
Purple, Pink	CBC, Differential, Platelet Count, H/H, HbA1C, Reticulocyte, BNP, ESR, Type and Screen, Rh, ABO
Gray	Lactic Acid (on ice), Glucose Tolerance Test, Blood Glucose, Ethanol



## References:

- Phlebotomy Blood Sampling. Dynamic Health / EBSCO Health - <https://www.dynahealth.com/skills/t913577-phlebotomy-blood-sampling#EBSCOHealth/CCMS/NAH/images/124194186>
- WHO Guidelines on Drawing Blood: Best Practices in Phlebotomy - <https://www.ncbi.nlm.nih.gov/books/NBK138665/>