Venipuncture

is a quick way to obtain a large sample of blood on which many different analyses can be performed. In a venipuncture, also called a **phlebotomy**, a superficial **vein** is punctured with a **needle** and blood is collected into a **syringe.**

Performing a Venipuncture

Phlebotomy supplies should be within easy reach of the phlebotomist. Supplies can be organized on a table adjacent to the phlebotomy chair or in a portable phlebotomy tray, so that supplies are readily accessible at patient bedside.

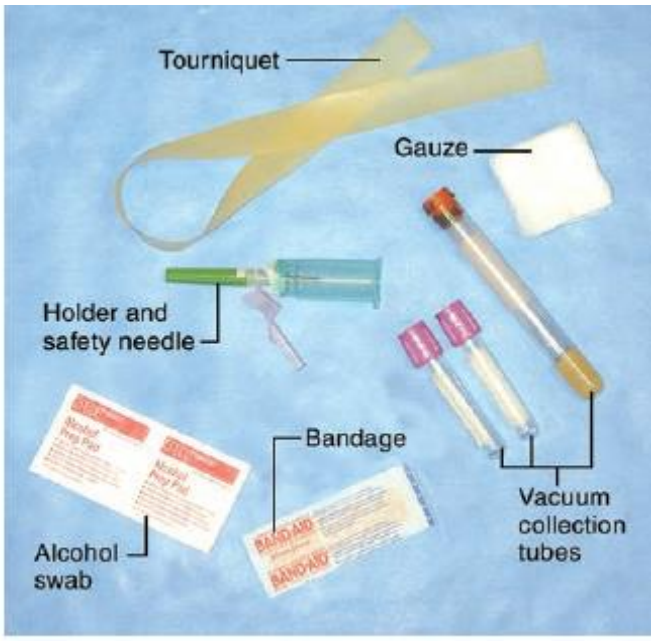


FIGURE 1-79 Venipuncture supplies

1- Preparing the Patient

The patient should be seated in a chair that has arm supports. The patient's arm must be fully extended and firmly supported so that it will remain still during the venipuncture.

2- Applying the Tourniquet

A **tourniquet** is applied to the arm to make the veins more prominent. The tourniquet should be left in place for no more than 1 minute during venipuncture procedure.

3- Selecting the Venipuncture Site

The puncture site should be selected after examining both arms to locate the best vein. The tourniquet can be applied to aid in selection of the puncture site.

The phlebotomist should **palpate** the vein by gently pressing the fingertip along the vein to determine its direction and estimate its size and depth.

* Veins that have scarring or bruising or that have had recent venipuncture should not be used.
* Blood should not be collected from an arm with an intravenous line
* or from the arm of a patient who has had a mastectomy (breast removal) on that side.

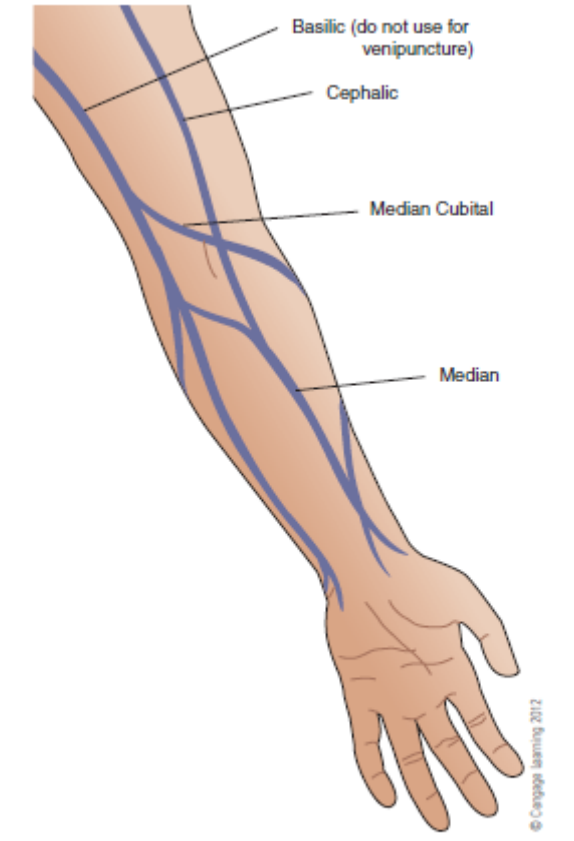


FIGURE 1-87 Cephalic or median cephalic veins are commonly used for venipuncture (left arm shown); use of the basilic vein for venipuncture is not recommended

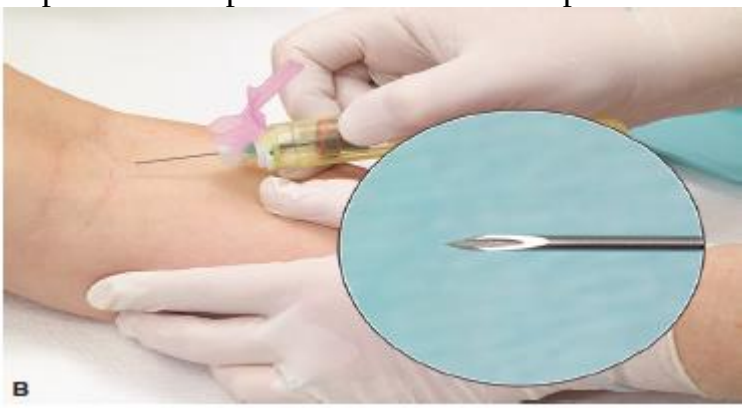
4- Preparing the Venipuncture Site

The area around the puncture site should be cleansed thoroughly in a circular motion from the center outward with a 70% alcohol swab . The site should then be allowed to air-dry or be wiped dry with sterile gauze.

5- Obtaining the Blood

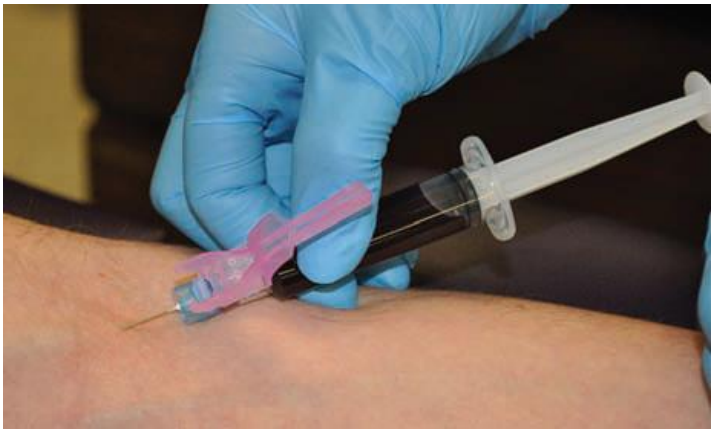
The needle should be held in one hand with the needle bevel facing up and the needle shaft lined up with the vein.

The phlebotomist should hold the patient's forearm and place the thumb on the arm 1 to 1½ inches below the selected puncture site to anchor the vein. The skin should then be pressed and pulled taut toward the phlebotomist.



Holding the needle/holder at a **15- to 20-degree angle**, the skin and vein should be entered in one smooth motion until the needle is in the **lumen** of the vein . Penetration of the vein should be at a low angle to prevent piercing the bottom wall of the vein, and possibly causing a **hematoma**, or swelling.

If a hematoma begins to form during the procedure, the tourniquet should be immediately released, the needle withdrawn, and gauze and pressure applied to the puncture site.



Completing the Venipuncture and Caring for the Patient

When the necessary blood has been collected, the tourniquet should be released. The tourniquet is *always* released before the needle is withdrawn from the vein to prevent hematoma formation at the venipuncture site.

As the needle is withdrawn from the vein, sterile gauze should be immediately placed over the puncture site and pressure applied .

The patient should be instructed to press the gauze on the puncture site with the arm extended to ensure that bleeding stops and a hematoma does not form.

The needle safety feature must immediately be activated as soon as the needle is withdrawn from the vein so that an accidental needle stick is not possible.

The phlebotomist should then apply patient labels to the tubes in the presence of the patient. The labels must contain patient information, date and time of collection, and phlebotomist's name or initials.