



## Blood Collection Procedures

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### Patient Preparation

Provide the patient, in advance, with appropriate collection instructions and information on fasting, diet, and medication restrictions when necessary.

### Specimen Preparation

Prior to each collection, review the laboratory's specimen requirement. Note the proper specimen to be collected, the volume needed for the procedure, the collection materials, and the storage and handling requirements.

To avoid incorrect identification, apply the adhesive label with identifying information to the specimen container in the presence of the patient. Each specimen must be labeled with:

- Patient's full name
- Date of Birth
- Medical record number (or other unique identifying number)
- Date and time of collection
- Phlebotomist's initials on the tube
  - NOTE: Transfusion Medicine specimens require FULL legible signature of the phlebotomist/collector.

Confirm the identification in the presence of the patient. Transport or process the specimen as required and store properly.

### Venipuncture Technique

#### Considerations:

- Draw specimens from veins without an I.V. present when possible; if not possible, draw the specimen distal to the I.V. site. Note this fact on the tube.
- Use a large enough needle to permit adequate flow of blood.
- Avoid drawing blood from a vein associated with a hematoma.
- If patient has had a mastectomy, do not draw blood from that side.
- Always use standard precautions when drawing or handling blood specimens and discarding needles.

## Materials:

Vacutainer® holder with double-end needle or wing-tipped butterfly needle  
Needles: 20-22 gauge for adults; 23 gauge for pediatrics

Alcohol or chlorohexidine prep pad	Tourniquet
Clean gloves	Gauze pads
Band-Aids	Zippered biohazard bag
Appropriate orders and ICD codes, requisitions, and labels	
Appropriate vacuum tubes (see volume requirements for each test)	

## Procedure for Vacutainer® Method:

1. Put on gloves.
2. Place the tourniquet about 3" to 5" inches above the vein site. Instruct the patient to extend the arm and open and close the hand a few times to engorge the veins for easier identification.
3. Palpate the selected vein if necessary, and then cleanse with alcohol or chlorohexidine prep pads. Allow the alcohol or chlorohexidine to dry completely. (Temporary release of the tourniquet may be required if subsequent steps are not performed quickly.) Never leave the tourniquet on the arm for more than 1 minute without releasing it.
4. Prepare the Vacutainer® holder by aseptically screwing the double-end needle into the holder. Prepare the Vacutainer® tubes (observe order of draw). Refer to test listings in this handbook for specific instructions. Invalid results may occur if improper collection techniques and collection tubes are used. The following order-of-draw, which is recommended when drawing several specimens during a single venipuncture, should be observed. (Mix all additive tubes thoroughly after collection.)
  - Pathology Order of Draw Guide
    - Blood culture tubes
    - Coagulation tubes (light blue tubes, citrate tubes)
    - Serum tubes with or without clot activator, with or without gel separator (red, gold, speckled-stopper)
    - Additive tubes: 1) Green top tubes with or without gel (heparin); 2) Purple top (EDTA) tube; 3) Gray top (oxalate/fluoride) tube (glucose); 4) Yellow (ACDC) tube
5. **Note:** *When using a winged blood collection set for venipuncture and a coagulation tube is the first to be drawn, draw a discard tube first. The discard tube should be a non-additive or a coagulation tube.*
6. Grasp the Vacutainer® holder with the dominant hand and place the index finger on the tube.

7. Puncture the vein at a 35° to 45° angle. As the needle enters the skin, lower the angle so you pierce only the anterior wall of the vein.
8. Push the Vacutainer® tube onto the needle in a Vacutainer® holder. Maintain stability of the needle in the vein. Blood should immediately begin to fill the tube due to vacuum action. If no blood flows, slowly retract or advance the needle until blood appears.
9. Remove the tube and replace it with a new tube as needed, keeping the needle steady and in the vein. Invert the collected tube of blood several times (5 or 6).
10. After all tubes have been collected, release the tourniquet. Remove the Vacutainer® tube from the holder before removing the needle from the vein.
11. Press a gauze pad over the venipuncture site and remove the needle. Have the patient lift his arm and hold the pad in place for 1-3 minutes until bleeding has stopped.
12. Place a Band-Aid over the site to prevent blood leakage.
13. Immediately attach barcode label to each specimen in the presence of the patient and place in a zippered biohazard bag.
14. Dispose of needle and attached holder in biohazard sharps container.
15. Transport specimens to the laboratory as soon as possible.

## **Skin Puncture / Fingertick Techniques**

### **Considerations:**

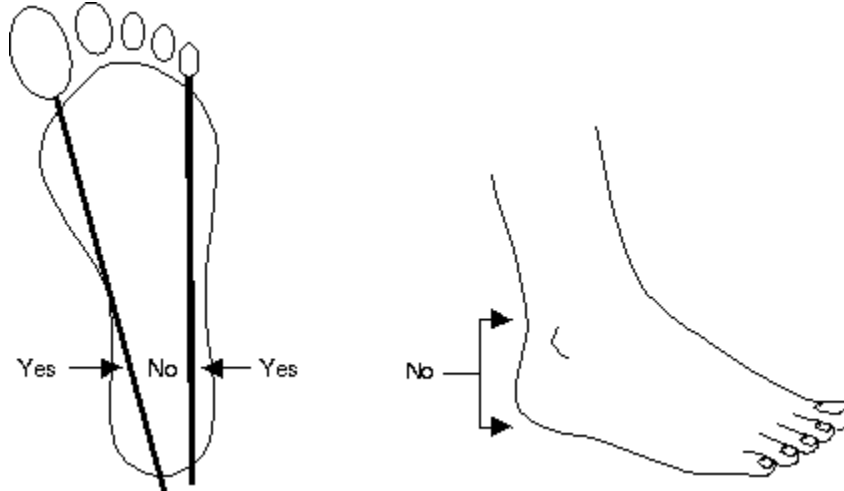
- Primary use is for collection of blood in infants and children using Microtainers™ or capillary collection tubes.
- Fingertick blood collections may also be used for certain tests in adults (ie, glucose, CBC).
- Avoid the mixing of tissue fluid with the blood sample (ie, do not squeeze or “milk” the puncture site excessively during collection).
- Collection sequence: EDTA → other additive → serum

### **Materials:**

Alcohol prep pad  
Sterile gauze or cotton ball  
Microlancet (fixed depth guide)  
Appropriate Microtainer™ tubes or capillary tubes (heparinized)  
Appropriate label(s) and requisitions

## Procedure:

The proper site for heel punctures is illustrated in the following drawing.



1. Thoroughly cleanse the puncture site area using an alcohol swab. Wipe off all excess alcohol and allow the site to dry.
2. Perform the puncture using a sterile microlancet which has a fixed depth guide.
3. Wipe away the first drop of blood before beginning the collection. Using only moderate pressure, collect blood by siphon action into the Microtainers™ or capillary tubes. Mix Microtainer™ tubes after they have been filled. If capillary tubes are used for hematocrit determination, touch tip of tube to drop of blood; blood will flow by capillary action. Seal tube with sealing clay, hold tube perpendicular to sealing clay. Place small tubes in red top Vacutainer® tube and label.
4. After the blood is collected, hold a sterile cotton ball or gauze pad over the puncture site until the bleeding has stopped.
5. Immediately label all specimens in the presence of the patient and place them into a zippered biohazard bag for transport to the laboratory.
6. Include any requisitions/transmittal slips in the outside pocket of the bag.