

VENIPUNCTURE SPECIMEN COLLECTION QUICK REFERENCE

Venipuncture Procedure Steps:

1. The Physician Writes an Order and the Requisition(s) is Generated
2. Enter the order into the LIS System, whenever possible
3. Seek out the Patient
4. Identify Self to the Patient & State Your Intent
5. Verify the Identification of the Patient
5. Review the Requisition (confirm all required information is present, verify dietary restrictions, identify any special collection requirements, e.g., Blood Bank collection, specimen needs to be placed in an ice bath, protected from light, collected in a "specific" tube, etc.)
6. Assemble Necessary Supplies
7. Put on Gloves
8. Reassure Patient
9. Position the Patient
10. Ensure the Patient's Hand is Closed
11. Assess the Appropriate Access Route
12. Apply Tourniquet if necessary (*the tourniquet must be released after no more than one minute*).
13. Cleanse the Site
14. Inspect the Equipment
15. Perform the Venipuncture
 - a) Evacuated Blood Collection System
 - b) Blood Collection Set (Butterfly, Winged Collection Set)
 - c) Plastic Syringe
 - d) Finger & Heel Sticks
16. Release the Tourniquet
17. Ensure the Patient's Hand is Open
18. Place Gauze Pad on the Site
19. Remove Needle and Apply Pressure
20. Dispose Puncturing Unit
21. Label Tubes
22. Complete Information on the Requisition
23. Assess Patient and Surrounding Conditions
24. Package Tubes for Transport
25. Remove Gloves & Wash your Hands

Venipuncture Procedure Steps:

The following information outlines the stepwise procedure for collection of diagnostic blood specimen(s) by venipuncture according to guidelines accepted by the University of Connecticut Health System (UCHS), Department of Laboratory Medicine. The venipuncture procedure requires both knowledge and skill. It is essential that these guidelines be judiciously followed for correct interpretation and optimal use of laboratory data.

1. The Physician Writes an Order and the Requisition(s) is Generated

The requisition must contain all required information to ensure the result is communicated to the appropriate individual(s) once the testing is complete and to provide immediate information to the laboratory should the integrity of the specimen be questioned. The test request must be clearly interpretable. Questions concerning information provided on the requisition should be clarified by the originating location before proceeding.

Demographic information required:

- a) Patient name
- b) An identification number (MRN# or SS#) (an identification number may need to be assigned for new patients)
- c) The doctor's name (name of attending required if requesting is a resident)
- d) The department or location for which the work is being done.
- e) The primary (and if applicable, secondary) diagnosis that supports the test(s) listed
- f) Other information as needed, e.g., special comments: diet restriction, site restriction, second report(s), fax locations, etc.

After the sample has been collected, the name or initials of the person who performed the procedure, the date and time the sample(s) was obtained must be documented on the requisition.

See #22 Complete Requisition Information.

2. Seek out the Patient

Proceed to the patient's room or have the patient move to the area where the sample will be obtained. The physician has priority with the patient. You should never enter the room without permission while the physician is visiting with the patient. However, if the order is STAT or the specimen is a "timed" specimen, you should ask the physician for permission to enter the room to draw the specimen.

3. Identify Yourself to the Patient & State Your Intent

Be sure to identify yourself to the patient in a kind and courteous manner. Professionalism must be displayed at all times. You should avoid startling the patient. If the patient is asleep, gently wake them. You must gain the patient's confidence and assure the patient that, although the venipuncture may be slightly painful, it will be of short duration.

4. Verify the Identification of the Patient

The identification of the patient must be verified by the individual who will be performing the venipuncture.

Inpatient: The wristband information on the patient's wrist or ankle must exactly match the information provided on the requisition. Note: If the patient is not wearing a wristband, one must be placed on the patient prior to drawing a blood sample. Exceptions are tolerated only when the patient's health is at risk by wearing the wristband on either their wrist or ankle (e.g., leather four-point restraint, Graft vs. Host Disease, severe skin conditions) and should be duly noted in the patient's chart. In these cases, the wristband must be placed on the foot of the patient's bed. The patient must also be verbally identified by their nurse or physician. Document this activity on the requisition as follows: "Patient identified by: _____". Ask the nurse or doctor to sign the requisition.

If you are using pre-printed labels and an electronic bar code reading device, see procedure.

Outpatient: Before obtaining the specimen, ask the patient to spell their last name and give their date of birth. This information must match EXACTLY the information on the requisition. Should there be a discrepancy, however minor, it must be corrected before proceeding. Contact the ordering physician, nurse or appropriate individual in the patient care area where the requisition originated.

Patients who are unconscious, too young, mentally incompetent or do not speak the language of the Healthcare provider must also be positively identified by someone accompanying the patient.

The unidentified emergency patient (John Doe) should be given a temporary but clear designation in accordance with John Dempsey Hospital (UCHS) policy until positive identification can be made.

5. Review the Requisition (confirm all required information is present on requisition, verify dietary restrictions, identify any special collection requirements, e.g., Blood Bank collection, specimen needs to be placed on ice, protected from light, collected in "specific" tube, etc.).

The Healthcare professional should view the requisition for technical information and determine if there are any special requirements and make any necessary adjustments (e.g., verify dietary restrictions relevant to specific lab tests, have ice bath available, foil or dark bag to protect specimen from light, etc.) as you select the tubes needed to fulfill the testing requirements for this order.

Review the test orders; consult the "Formulary" if you have any questions concerning which tube should be drawn. If questions remain, call the clinical laboratory for guidance (679-2498). If test requests are unclear, consult the physician, nursing staff or have the chart reviewed for clarification.

Refer to the *Blood Bank Collection* section for more detail concerning collection and labeling criteria specific for blood that potentially could be used for transfusion purposes.

Discuss patient history relative to the procedure that you are about to perform (e.g., allergies to latex, providone-iodine, surgical procedures, presence of an indwelling line or catheter, etc.) with the patient.

Therapeutic monitoring (e.g., prothrombin time, APTT, salicylic acid, digoxin and other drugs) and tests exhibiting diurnal effect (e.g., glucose, corticosteroids, serum iron and some hormones) may require specific physician instruction for the patient prior to testing and should be verified by the Healthcare professional when appropriate.

6. **Assemble Necessary Supplies**

Prepare the following supplies:

- a) Blood collection tubes
- b) Tourniquet
- c) Alcohol pads - alcohol prep pads or 0.5% chlorhexidine gluconate in 70% alcohol
- d) Providone-iodine pads - if blood cultures are to be drawn or if a nonalcoholic based cleanser is needed for collection of a serum blood alcohol.
- e) Gauze pads (cotton balls should only be used on patients with dermatitis)
- f) Gloves
- g) Needle and Holder

Ensure that the Healthcare provider has access to the appropriate personal protective equipment (PPE) necessary to provide care for all patients including those with special needs (e.g., allergies to iodine, latex hypersensitivity, isolation masks, gowns, etc.).

7. **Put on gloves**

Be sure to don gloves BEFORE accessing the patient for venipuncture.

8. **Reassure Patient**

Never tell the patient that the procedure will not hurt. Refer to the section of *Age Specific Phlebotomy* for more information concerning addressing patients in different age groups.

9. **Position the Patient**

Position the patient as comfortably as possible. Position their arm so that the vein is readily accessible for you while ensuring you can work in a relaxed position. Do not place any equipment on the patient's bed and do not sit on the patient's bed. A spare pillow belonging to that patient may be used to offer additional support when they are lying down. If the patient is sitting, instruct them to form a straight line from the shoulder to the wrist. Their arm should be supported firmly on an armrest and should not be significantly bent at the elbow. A slight bend at the elbow may be important in avoiding hyperextension of the arm.

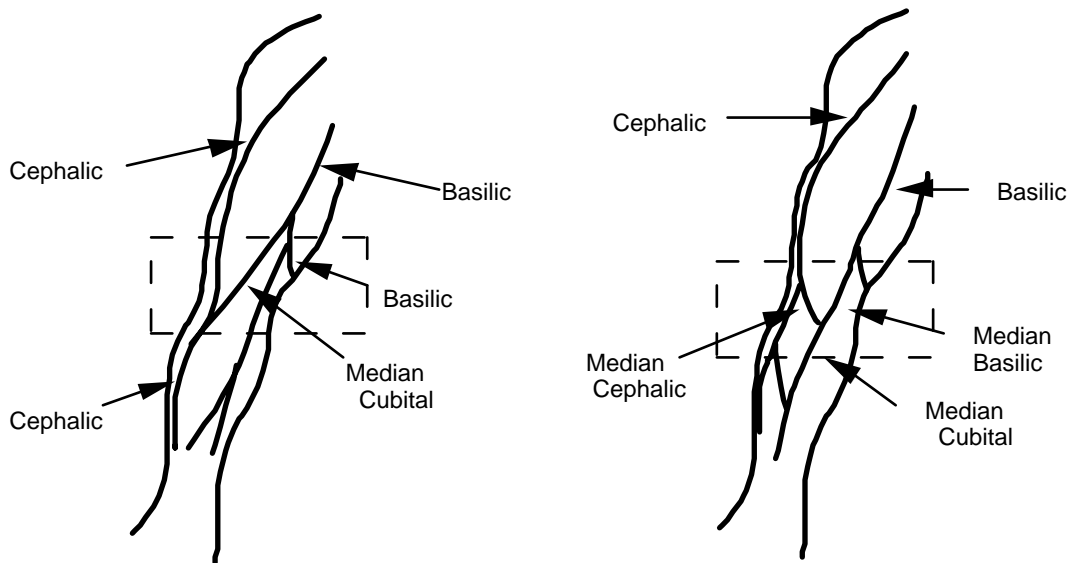
10. **Ensure the Patient's Hand is Closed**

Have the patient close their hand to make the veins in their arm easier to palpate. **Do not have the patient "pump" their hand** by vigorously opening and closing. This can cause changes of certain analytes in the blood.

11. **Assess the Appropriate Access Route**

Assess the appropriate access route by inspecting the patient's arm. Locating and evaluating a vein which has the qualities that make it an ideal selection for venipuncture can be one of the most difficult parts of the procedure. Often the superficial veins of the forearm are too small and the veins best suited for the puncture are deeply embedded in the subcutaneous tissue. There is considerable variation in the pattern and sizes of the superficial veins of the forearm. The diagram below will give you an idea of the more common patterns. Of the three veins in the antecubital area acceptable for venipunctures, the median cubital vein is the vein of choice. This vein is more stationary, puncturing it is less painful to the patient, it is usually closer to the surface of the skin and it isn't nestled among nerves or arteries. After a visual inspection of the antecubital area, check both arms for the medial vein before considering one of the alternatives. The cephalic vein

on the lateral or thumb side, of the arm is the 2nd vein of choice. Keep the basilic vein as the last vein of choice because of its proximity to underlying nerves and the brachial artery.



The area outlined by the dotted lines situated in front of the elbow is called the antecubital fossa. This is the area where most venipunctures are performed.

After visual inspection of the antecubital fossa area, palpate or feel for the vein. The vein will feel like a tube that "gives" with pressure. If the vein is difficult to find, it may become easier to see after gently massaging the arm from wrist to elbow. If no vein is apparent at this time, examine the other arm.

Determine the appropriate type of needle and blood drawing system based on the patient's physical characteristics and the amount of blood to be collected.

12. Apply Tourniquet

A tourniquet can be applied to assist in locating veins if needed. Note: **The tourniquet must be released after no more than one minute.**

If a tourniquet must be applied for the preliminary vein selection, release it and reapply after two minutes. Wrap the tourniquet around the arm three to four inches (7.5 to 10.0 cm) above the venipuncture site. If the patient has a skin problem, apply the tourniquet over the patient's gown or a piece of gauze pad or paper tissue should be used so that the skin is not pinched. If a tourniquet becomes contaminated with blood or body fluids, discard it.

13. Cleanse the Site

Select the vein site and cleanse with a commercially prepared 70% isopropyl ethyl alcohol pad using a circular motion from the center to the periphery. Do not wipe the area with a gauze pad. Allow the area to **air dry**. Residual cleanser may cause hemolysis of the specimen and cause the patient to experience a burning sensation during venipuncture. This is also very important when considering the potential dilution factor when small volumes of blood are collected by finger/heel stick for analysis.

Do not touch the site once it has been cleansed. If the venipuncture proves difficult and the vein must be touched again to draw blood, the site must be cleansed again.

14. Inspect the Equipment

- a) Perform a visual inspection of the needle to ensure it is free of hooks at the end of the point, and that its opening is free of any small particles that could obstruct the flow of blood.
- b) Determine what tubes are needed, and put them in easy reach.

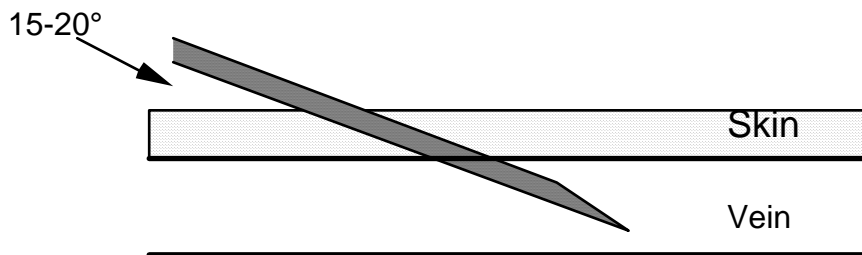
15. Perform the VeniPuncture

Evacuated Blood Collection Systems are the most commonly used and preferred means of collecting the blood specimen. This system is composed of three basic components: a sterile blood collection needle (21 to 23 gauge), a holder that is used to secure both the needle and the evacuated tube containing a pre-measured vacuum and additive. (See stepwise instructions)

Evacuated Blood System Collection:

- Thread the appropriate needle into the holder until it is secure, using the needle and sheath as a wrench.
- Use sterile blood collection tubes. Gently tap all tubes that contain liquid additives to dislodge from the stopper and wall of the tube before proceeding.
- Insert the blood collection tube into the holder and onto the needle up to the recessed guideline on the needle holder (it is a good idea to position the label of the tube toward the bottom of the holder so that you can visually detect that the blood has began to flow). Avoid pushing the tube beyond the guideline, because a premature loss of the vacuum may result.. The engaged tube will react slightly. Leave it in this position.

- Make sure the patient's arm or other venipuncture site is in a downward position whenever possible to prevent reflux or "backflow".
- Grasp the patient's arm firmly. Use your thumb to draw the skin taut. This technique anchors the vein. Your thumb should be one or two inches below the venipuncture site. Never place your finger above the insertion site of the needle.
- With the bevel up, align the needle with the vein and puncture the vein. Grasp the flange of the needle holder and push the tube forward until the butt end of the needle punctures the stopper.
- The needle should be aligned with the vein, and form an angle of approximately 15 - 20 degrees with the skin (see diagram below). Puncture the skin with a clean, smooth motion. Do not hesitate. As the needle enters the vein, a slight "give" can be felt. If using a butterfly needle, a slight flash of blood will be seen in the tubing once the needle enters the vein.



If there is poor, or no flow, attempt to reposition the needle. Observe the placement of the needle, and choose from the following:

- a) If the needle seems not far enough into the vein, advance it gradually while watching for a flow.
 - b) If the needle seems too far in, you may have gone through the vein. Retract the needle slowly while observing for blood flow. Do not pull the needle out of the arm while the tourniquet is on, or a hematoma can result.
 - c) If you feel that the needle is in the vein and still do not see blood flow try another tube. The tube being used may not have sufficient vacuum.
 - d) Loosen the tourniquet. It may have been applied too tightly, thereby stopping the blood flow.
- Probing may be painful to the patient and should only be attempted by an experienced phlebotomist, who has palpated the vein after the needle has been placed and who has reasonable expectation of success. Otherwise, make another puncture in a site below the first site, use another vein on the other arm. If unsuccessful a second time, you may want to consider a fingerstick. **NEVER ATTEMPT MORE THAN TWO VENIPUNCTURES.** If the specimen is still

unattainable, inform the patient that someone else will be back to draw the blood work. Inform the nursing unit staff that you were unable to obtain the blood.

- Release the tourniquet when the last tube is half full (maximum one minute). When multiple specimen tubes are collected, remove the last tube collected from the holder, prior to releasing the tourniquet from the patient's arm.
- Fill each tube until the vacuum is exhausted and blood flow ceases. This will ensure that there is a correct ratio of anticoagulant to blood. It may be normal for the tube to be not completely filled.
- Keep constant, slight forward pressure (in the direction of the needle) on the end of the coagulation (light blue cap) tube until it is completely filled. This prevents release of the shut-off valve and stopping of blood flow. Do not vary pressure or reintroduce pressure after completing the draw.
- When blood flow ceases, remove the tube from the holder. The shutoff valve recovers the point, stopping blood flow until the next tube is inserted.
- When multiple specimen tubes are collected remove the last tube collected from the holder prior to withdrawing the needle from the patient's arm. The following order-of-draw, which is recommended when drawing several specimens during a single venipuncture, is based on pragmatism. Its purpose is to avoid possible test result error due to cross contamination from tube additives.
 1. Blood Cultures
 2. Non-Additive Tubes
 3. Coagulation (when using a butterfly, or collecting for special Coag procedures, always collect discard tube (non additive) first)
 4. Additive tubes
 - Gel Separator
 - Heparin
 - EDTA
 - Oxalate / Floride
- Immediately after drawing, mix each tube by gently inverting the tube 5 - 10 times. To avoid hemolysis, do not mix vigorously.

- Note that blood collection sets used at UCHS are Safety-Lok™ and the safety mechanism must be activated each time the device is used. See #19 *Removal of Needle* for proper removal and engagement of safety mechanism.

Blood Collection Set (Butterfly, Winged Collection Set): this set contains a short needle, 21 to 25 gauge, with attached tubing and evacuated tube holder to be used with standard evacuated tubes. (See stepwise instructions)

Blood Collection Set (Butterfly, Winged Collection Set):

- Use sterile blood collection tubes. Gently tap all tubes that contain liquid additives to dislodge from the stopper and wall of the tube before proceeding.
- Make sure the patient's arm or other venipuncture site is in a downward position if possible to prevent reflux or "backflow" and cleanse the site.
- Thread the luer adapter into the tube holder and remove the needle sheath.
- Grasp the patient's arm firmly. Use your thumb to draw the skin taut. This technique anchors the vein. Your thumb should be one or two inches below the venipuncture site. Never place your finger above the insertion site of the needle.
- Grasping the "wing(s)" of the butterfly and with the bevel up, align the needle with the vein and puncture the vein.
- Insert the blood collection tube into the holder and onto the needle up to the recessed guideline on the needle holder (it is a good idea to position the label of the tube toward the bottom of the holder so that you can visually detect that the blood has begun to flow). Avoid pushing the tube beyond the guideline, because a premature loss of the vacuum may result.
The engaged tube will react slightly. Leave it in this position. Be sure to keep replacement tubes within easy reach.
- Continue the blood collection as outlined above. Be sure to follow the tube order-of-draw listed above and gently mix all tubes.

- Note that blood collection sets used at UCHS are Safety-Lok™ and the safety mechanism must be activated each time the device is used. See #19 *Removal of Needle* for proper removal and engagement of safety mechanism.

Plastic Syringe: In general, venipuncture using a needle and plastic syringe should be avoided for safety reasons. In cases where a specimen from an individual with fragile or thready veins or if the test specifically necessitates a syringe be utilized, a needle and syringe may be used. (See stepwise instructions)

Plastic Syringe:

- Prior to collecting the specimen, move the plunger within the barrel to show syringe and needle patency and freedom of plunger movement. Follow the same procedures as listed above. Transfer the specimen from the syringe to the evacuated tube by puncturing the diaphragm of the rubber stopper and allowing the correct amount of blood to flow slowly into the tube along the wall. The tube should not be hand-held when puncturing the top. NEVER force blood into an evacuated tube by exerting pressure on the plunger. This may cause the tube stopper to pop off, suddenly spraying blood.
- Continue the blood collection as outlined above. Be sure to follow the tube order-of-draw listed above and gently mix all tubes containing an anticoagulant. Do not remove the needle from the plastic syringe before disposing. The intact collection device can be discarded into a sharps container.

16. Release the Tourniquet

Release the tourniquet, *if used*, after no more than 60 seconds. Localized stasis can occur with hemoconcentration and the possible formation of a hematoma due to infiltration of blood into tissue. This may result in erroneously high values for all protein-based analytes, packed cell volume, and other cellular elements. Do not release the tourniquet as the last tube is filling.

17. Ensure the Patient's Hand Is Open

This reduces the amount of venous pressure as muscles relax.

18. Place Gauze Pad on the Site

Place a clean gauze pad lightly on the venipuncture site. Do not press on the gauze pad until the needle is removed from the patient's arm. Cotton balls are not recommended for routine venipuncture and should only be used on patients with dermatitis. Lightly bloodied gauze can be discarded with regular waste.

19. **Remove Needle and Apply Pressure**

Remove the needle while keeping the bevel in an upward position. Do not scratch the patient's arm with the needle upon removal. Apply firm pressure to the site with the clean gauze pad immediately following the withdrawal of the needle until all bleeding has stopped. If possible, ask the patient to hold pressure.

If a Butterfly (Safety-Lok™) is used to collect the specimen be sure to withdraw the needle from the patient by:

- Grasping the translucent yellow safety shield grip area with the thumb and index finger while at the same time grasping the tubing, or
- Grasp either one wing or both wings and withdraw.

The Safety Lok™ shield **must** be activated. Engage the safety device as follows:

- Hold either wing with one hand
- Hold the grip area at the base of the yellow safety shield with your other hand.
- Slide the wings back into the safety shield until a slight "snap" is felt. This indicates that the needle is retracted completely and locked securely in place.
- Dispose in the nearest sharps container. Do not disconnect needle from tube holder.

For out-patients, an adhesive or gauze bandage can be placed on the venipuncture site after ensuring that stasis is complete. Instruct patients to remove the bandage after 15 minutes. If bleeding persists longer than five minutes, a nurse or physician should be alerted. Pressure must continue at the site as long as necessary to stop the bleeding.

20. **Dispose Puncturing Unit**

A puncture-resistant disposal container, for placing used needles and disposable syringes with attached needles, must be within reach of the Healthcare professional. The container should be made of rigid plastic, metal, or stiff cardboard, and must be consistent with OSHA regulations. Dispose of needles promptly in a puncture-resistant container to prevent their reuse or accidental injury. Needles should not be re-sheathed, bent, broken, or cut, nor should they be removed from disposable syringes.

21. **Label Tubes**

Label tubes before leaving the side of the patient. Pre-printed LIS labels or address-o-graph labels are encouraged after the information on the label has been verified. The address-o-graphed label should be placed "flag" style directly under the cap-of the tube. Place the LIS label on the tube so that, if the cap is in your left hand, the label is right side up. Handwritten labeling is

permitted provided all the required information is accurate and legible. All specimens should be labeled in ink or an indelible marker. The information provided on the tube must match the information provided on the requisition exactly. The minimum information required on a tube of blood sent to the laboratory for evaluation, excluding specimens submitted for Blood Bank tests, is the patient's full name and unique hospital identification TOO#. For Blood Culture bottles, be sure not to cover the bar-code or the sensor located in the bottom of the bottle (using the "flag" style mechanism on the neck of the bottle is preferred for label placement). The Blood Culture bottle also has a bar code label that should be removed from the bottle and placed on the requisition specific for that draw.

22. Complete Information on the Requisition

Complete the required information on the requisition by documenting the date, time (be specific, a.m. and p.m. alone are not considered valid times) and identification used to identify the phlebotomist. Document other information as needed such as special comments noted by the staff performing the phlebotomy procedure that may impact the result (intravenous site, unusual circumstances surrounding the draw, time of medication dosing if relevant to test requested, etc).

23. Assess Patient and Surrounding Conditions

Make sure that the patient's condition is satisfactory before exiting the patient care area (make sure patient's bed and side-rails are in their original position before leaving their room).

24. Package Tubes for Transport

If specimens are to go to the lab by courier place the specimen(s) in a Ziploc bag and seal. Place the completed requisition in the outside flap of the same bag so that the patient's name and TOO# are visible. Send the appropriately labeled specimens(s) to the Central Processing Laboratory to as soon as possible. Special attention must be paid to tests that are requested as STAT priority or have time limitations that can adversely affect the results. These specimens must be immediately delivered to the laboratory.

When the specimens arrive in the laboratory the requisition must be clock stamped to verify the date and time of receipt.

25. Remove Your Gloves and Wash your Hands

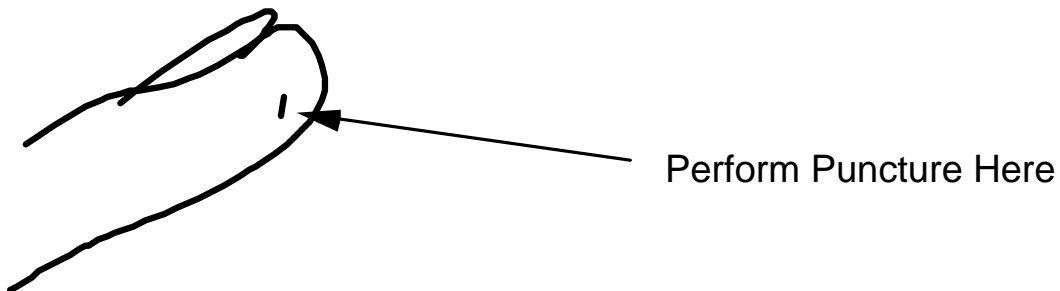
Remove your gloves and dispose of them in the proper container. Wash your hands. Turn the faucet off with a clean paper towel so that hands are not re-contaminated.

Finger & Heel Sticks:

A finger or heel stick may be necessary for very young patients or patients with extremely difficult veins when the laboratory test(s) can be performed with a small volume of blood. (See stepwise instructions)

Fingerstick:

- When only small volumes of blood are needed from a patient, it may be possible to collect the blood by fingerstick, thereby saving the patient a venipuncture.
- Using clean gloves, wipe the finger with an alcohol wipe and allow it to air dry.
- Massage the finger using a milking action, towards the tip to induce blood flow.
- The correct incision site selection is vital to the success of the blood collection procedure. The middle and fourth fingers are preferred for painless skin incisions. These fingers also tend to bleed better. The index finger and the middle portion of any finger should be avoided because of increased sensitivity to pain.
- Hold the finger firmly between your thumb and forefinger, and exert slight pressure on the last joint, in order to fill the fingertip with blood.
- Place the lancet against the tip of the finger. The incision should be made approximately 3.0-5.0 mm. from the nail bed. This area of the finger is more vascularized and less sensitive to pain. See diagram-below.

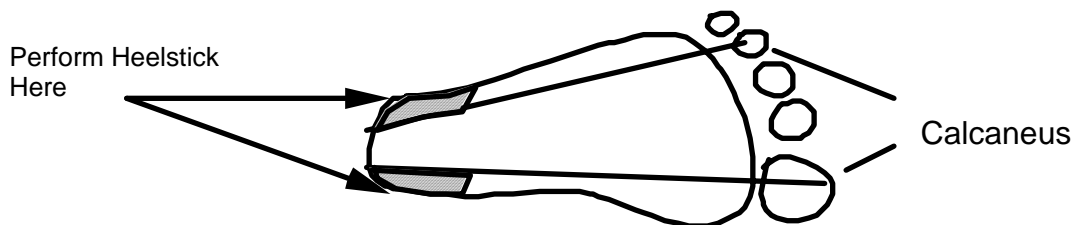


- Press down firmly on top of the lancet and release. Remove the lancet and discard in a sharps container.
- With a clean gauze pad, wipe away the first drop of blood. The first drop is overly contaminated with tissue fluid and should never be as a laboratory sample.
- Begin collection of blood with the second drop, and continue until sufficient blood has been collected. It may be necessary to apply gentle pressure to the finger to maintain a flow of blood.
- If the flow of blood ceases, it may be necessary to massage the finger towards the tip to maintain blood flow. However, undue pressure will cause dilution of blood with tissue fluid and/or hemolysis.
- When multiple specimen tubes are to be collected by fingerstick, follow the order-of-draw listed below.
 - Blood gases
 - EDTA tubes
 - Other additive tubes
 - Non-additive tubes (serum tubes)
- If you are collecting blood into a microtainer containing an anticoagulant it is important to ensure the container is sufficiently filled, cap and gently invert the container 5-10 times.
- Hold a clean gauze over the puncture until the bleeding stops.
- Properly label the container.
- Place the specimen in a plastic ziplock bag.
- Note the date and time of the collection along with your name on the requisition.
- Properly discard the waste in the regular trash.
- Apply a bandage to the puncture site if needed.
- Remove and dispose of gloves in the trash and wash your hands.

HINT: Sometimes placing a warm washcloth (about 40°C to the proposed site for about five minutes), or commercial prewarmer on the finger prior to the fingerstick will increase blood flow to the area. Lowering the extremity over the bedside will also allow veins/capillaries to fill to capacity.

Heel Stick:

- Put on fresh gloves and clean the heel with an alcohol wipe. Allow it to air dry.
- Hold the foot securely, with the heel cradled between thumb and forefinger.
- Place the lancet on the side of the heel (do not use the center, as bone may be damaged). See diagram below.



Side to side limits of the calcaneus are marked by a solid line extending posteriorly between the 4th and 5th toe, running parallel to lateral aspects of the heel and a second line extending posteriorly from the middle of the great toe running parallel to the medial aspect of the heel. Heel punctures should be performed on the plantar surface of the heel, beyond the lateral and medial limits of the calcaneus, marked by the gray area.

- Press down firmly on top of the lancet and release. Remove the lancet and discard in a sharps container.
- Wipe away the first drop of blood, and then collect the sample in accordance with the procedure, that you are performing.
- If blood does not flow freely, gently massage the bottom of the foot towards the puncture. However, undue pressure could cause dilution of blood with tissue fluid and/or hemolysis.
- When multiple specimen tubes are to be collected by heel stick, follow the order-of-draw listed below.
 - Blood gases
 - EDTA tubes

- Other additive tubes
- Non-additive tubes (serum tubes)

- If you are collecting blood into a microtainer containing an anticoagulant it is important to ensure the container is sufficiently filled, cap and gently invert the container 5-10 times.

- Hold a clean gauze over the puncture until the bleeding stops.

- Properly label the container.

- Place the specimen in a plastic ziplock bag.

- Note the date and time of the collection along with your name on the requisition.

- Properly discard the waste in the regular trash and apply a bandage to the puncture site if needed.

- Remove and dispose of gloves in the trash and wash your hands.

- HINT: Sometimes placing a warm washcloth (about 40°C to the proposed site for about five minutes), or commercial prewarmer on the finger prior to the fingerstick will increase blood flow to the area. Lowering the extremity over the bedside will also allow veins/capillaries to fill to capacity.

Additional Considerations

- Keep the collection basket well stocked. Supplies within the basket must be inventoried at regular intervals to ensure that all supplies are *within* expiration date. Do not use any product which has exceeded the manufacturer's expiration date.
- Ensure that the patient has no foreign objects in their mouth. No food, chewing gum, or thermometer should be in the patient's mouth at the time the specimen is drawn.
- The patient may ask the phlebotomist questions concerning the type of testing done on them. Do not try to explain the possible reason for a specific test but rather explain that it is blood work that their physician feels is necessary. If the patient requests additional information, you should refer the patient to their physician. Providing too much information to the patient can lead to misinformation and possible legal action.
- Never argue with a patient; if the patient refuses to have blood work drawn, explain that the doctor has ordered the testing because it is necessary. If gentle persuasion does not succeed, inform the nurse in charge of the patient; the nurse may be able to convince the patient to cooperate. If unsuccessful, write "Patient Refuses" on the requisition and bring the requisition back to the laboratory. Inform the nursing staff of the situation.
- Specimens collected from a hematoma area may cause erroneous test results. Do not draw blood from any size hematoma if it can be avoided. If another site is not available, the specimen should be collected distal to the hematoma.
- Because of potential harm to the patient due to lymphostasis, do not draw blood from the side on which a mastectomy was performed unless you have a written order from her physician.
- Some specimens must be drawn at timed intervals because of medications, fasting requirements, and/or biological variations (circadian rhythm). It is important that collection of specimens for timed tests be obtained at the precisely specified interval. Be sure to label both the specimen and the requisition with information that can distinguish specific samples and link them to a requisition containing information pertinent to that draw.
- All laboratory specimens are considered infectious and must be bagged for transportation to the laboratory if delivered by transportation staff. Consult your Infection Control Manual for more details.

- A-V Fistula/Shunts - when the patient has a fistula, do not use that arm for venipuncture, the pressure from the tourniquet could cause a clot in the shunt.
- Specimens drawn through Central Venous Pressure Lines (CVP) are only obtained by trained nursing staff.
- If the patient appears to be unruly, ask the nursing unit staff for assistance. If the patient continues to be violent and poses a hazard to the staff drawing the blood, do not proceed. Document and communicate this information to the physician.
- Carefully observe the patient for signs of reaction during and immediately following the venipuncture. If they feel cold or clammy, sweat profusely or look pale, be prepared for them to faint. If the patient faints, remove the tourniquet, remove the needle and call for help. If the patient is sitting, it may be necessary to allow them to lie down. Notify the patient's nurse, or in case of an out-patient, have the patient evaluated by a physician before they leave the area.
- If the patient is experiencing nausea make them as comfortable as possible. Instruct the patient to breathe deeply and slowly. A cold compress can be applied to the patient's head. Contact your supervisor or the patient's nurse.
- If the patient vomits, give them a basin or carton and have tissues ready. Contact your supervisor or the patient's nurse.
- If the patient begins to have convulsions, try to prevent them from injuring themselves. Do not restrain the movements of their extremities completely. Contact your supervisor or the patient's nurse.
- Take special care when drawing blood from a semiconscious or comatose patient to anticipate any unexpected movements or jerks while introducing the needle, or while the needle is in the arm. Proper supplies should be readily available and the tourniquet quickly released in the event the needle is violently removed or repositioned. If any injury occurs, you must inform the physician or nurse in charge of the patient so that an examination for possible damage can be performed and report this occurrence to your supervisor so that a Risk of Injury (RIR) form can be completed if needed. Refer to your Safety Manual.

- Immediately report an accidental needle stick or contamination of a break in the skin by blood or excreta to your supervisor and follow the directions on the "Safety Is For Life" poster in accordance with UCHS policies.
- Should a patient present unexpectedly as non-responsive, contact a physician or nurse immediately.
- Patients placed on Isolation should have the "Isolation Stop Sign" placed on their closed door to alert others who may enter the room. Healthcare workers should enter the room wearing the appropriate personal protective equipment (PPE) depending on the type of patient isolation (Refer to your Infection Control Manual). A 3M 1812 mask must be available to personnel entering a respiratory isolation room. DO NOT ENTER THE ROOM WITHOUT ONE. Take adequate supplies into the room. Any supplies taken into the room must be left there, or discarded. Never take blood collection trays into an isolation room.
- Intravenous Therapy: Specimens should NOT be collected from an arm with an intravenous site. However, if necessary, satisfactory samples may be drawn below the I-V by first asking the nurse to turn the I-V off for at least 2 minutes before venipuncture. Apply the tourniquet, if needed, below the I-V site. Select a vein other than the one with the I-V. Perform the venipuncture. Draw 5 mL of blood into a red top tube and discard before drawing test specimens. You must indicate on the requisition that the sample was drawn from an arm that had an I-V. If this is impossible, consult the attending physician. Never collect blood from above an active intravenous site. If there is a written physician order necessitating this type of draw ask the nurse to shut off the I-V flow, and return to draw the patient after 15-20 minutes have passed. Be sure to draw a 5 mL discard red top tube. Document this activity on the requisition so that a comment can be made on the patient's report. Laboratory staff must NEVER manipulate an I-V in any manner.