MHC Laboratories Specimen Collection Venipuncture

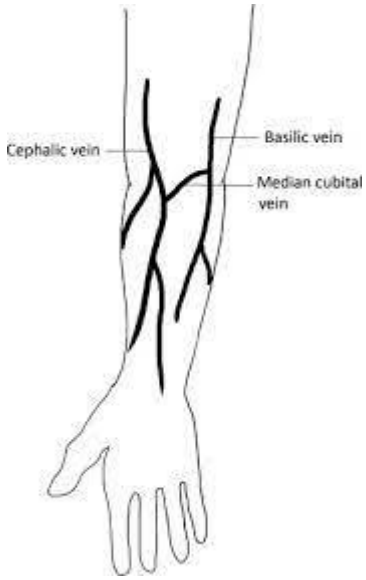
Venipuncture is performed by qualified laboratory personnel or healthcare team members to obtain blood specimens for testing. MHC laboratories provides continuing education and training courses for offices/clinics that utilize MHC laboratories as their referral laboratory. Contact your nearest laboratory for more information.

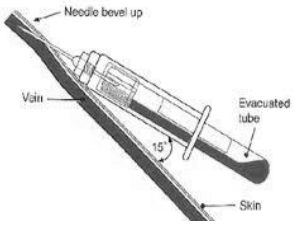
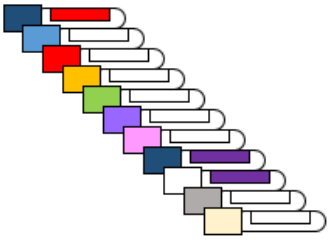
Never attempt venipuncture more than twice. Refer patient to another qualified team member or outpatient laboratory collection location. For difficult access patients or for a pediatric specialist, please notify the laboratory to coordinate ultrasound guided venipuncture or pediatric speciality resource.

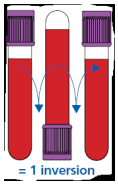
Special or additional collection instructions per test can be found in the test menu catalog.

Venipuncture Procedure:

Step	***Action***	***Example/Why?***
1	**Perform TWO Positive Patient Identification and compare to laboratory requisition for accuracy.** 1. Patient Legal First and Last Name (as on requisition) 2. 2nd Identifier; Patient Date of Birth, Medical Record #, last 4 of Social Security # (as on requisition) *Note: Ask the patient to verbally verify information. If unable to verbally verify, check with family member or healthcare team member, and or verify with patient identification wristband.*	 *Do not proceed if information does not match exactly! Review with patient and ordering provider to make corrections prior to continuing.*
2	**Position the patient for Venipuncture:** 1. Have the patient assume a sitting or supine position (laying down). 2. Position the arm on a steady support on the bed/chair arm so to make the veins easily accessible. *Note: Never attempt a venipuncture with the patient standing up!*	 
3	**Wash hands then wear protective gloves.**	

4	**Assess patient for venipuncture location:** 1. Apply tourniquet approximately 3 to 4 inches above the possible venipuncture site. **Do not leave tourniquet on for more than 1 minute before start of draw. If unable to perform draw within 1 minute, release tourniquet for 2 minutes and start over.** Place above clothing when possible, to decrease the chance of discomfort and pinching. It will also be more visible for removal. If necessary to draw from an arm with intravenous (IV) running, place tourniquet below the IV site and draw from below the IV site. 2. Instruct the patient to clench the fist. **Discourage pumping of the fist as such activity can elevate levels of potassium and ionized calcium in the bloodstream.** 3. Palpate skin to select acceptable venipuncture site. Acceptable sites in order of preference: a. Antecubital area: i. Median cubital vein –large, well anchored, least painful, least likely to bruise. ii. Cephalic vein – not as well anchored and more painful when punctured than the median cubital vein iii. Basilic vein – not well anchored, and lies near the brachial artery and median nerve, which could be accidentally punctured. b. Dorsal Hand/wrist area: i. Never access veins on the underside of the wrist, could cause nerve damage. ii. Smaller vein diameter, so a smaller gauge needle and less vacuum may be needed (example 23g butterfly with syringe) c. Foot area: i. Should be avoided. If not other site is available, written approval must be obtained from the physician before drawing from the foot. *Note: Attempt to locate the median cubital vein on either arm before considering alternative veins. Consider hand/wrist veins over the basilic vein, due to potential for hitting the nerve or artery underlying the basilic vein.*	 *Never perform the following:* ✓ *Leave tourniquet on for more than 1 minute* ✓ *Place tourniquet above a running intravenous IV* ✓ *Draw from underside wrist area* ✓ *Draw from foot without a provider order for foot draw* 
5	**Select and setup appropriate equipment and supplies:** **1.** Use Vacutainer system for most antecubital veins **2.** Use Syringe/butterfly system for fragile hand, foot, or obscure arm veins, or for uncooperative patients. **3.** Alcohol Wipe **4.** Gauze **5.** Tape or Coban –outpatient use only **6.** Tubes as required by testing on requisition	 *Never reuse or use pre opened supples! To maintain sterile enviorment always open at time of procedure.*
6	**Cleanse venipuncture site with alcohol wipe:** 1. Using a circular motion starting at the venipuncture site and moving outward. 2. Allow alcohol to dry. **3.** Do not repalpate the site after cleansing.	

7	**Insert the needle to start venipuncture:** 1. Warn patient that you are going to start the venipuncture a. *Example Say 1, 2, 3, poke* 2. Anchor the vein below the venipuncture site with the free hand. 3. Insert the needle, bevel up, quickly and smoothly into the vein at a 15° to 30° angle to the skin. . **If blood flow is not established, acceptable repositioning of the needle includes:** 4. Pull needle back –to correct penetrating too far through the vein 5. Advance needle further –to correct not penetrating far enough into vein 6. Pull needle back and rotate ½ turn for lateral needle relocation. a. Never attempt lateral redirection when nerves and arteries are in close proximity, such as the basilic vein. 7. Manipulation, other than mentioned, is considered probing, which is not recommended.	  *If the patient feels a sharp, tingling pain which many shoot up and down the arm, immediately end the venipuncture, as continuation risks permanent injury to the nerve.*
8	**Collection Specimen(s):** 1. For Vacutainer system: a. Push tube to the end of the holder, being careful not to push the needle further into the arm b. Maintain the tubes in a downward position, so that the blood and any tube additive does not touch the needle. c. When vacuum is exhausted, blood will stop flowing in the tube. d. If more than 1 tube is required, remove the filled tube and place the next tube on holder continuing until all tubes are filled. e. Immediately after drawing each tube, mix the blood gently and thoroughly by inverting the tube 8 – 10 times 2. For Syringe system: a. Gently pull back on plunger until required amount is withdrawn **Draw Tubes in the following Order:** ✓ Dark Blue Metal Free/Red Label ✓ Light Blue Sodium Citrate **Must be Full!** ✓ Red & Gold Serum with & without clot activator or gel barrier ✓ Green Heparin with & without gel barrier ✓ Dark & Light Lavender EDTA ✓ Pink, White or Dark Blue Metal Free/Lavender EDTA ✓ Grey Potassium Oxalate/Sodium Fluoride ✓ Yellow ACD no gel The order that the tubes are drawn can affect laboratory test results. To eliminate this effect, please follow the correct order when drawing multiple tubes from a patient: 1. Blood culture bottles must always be drawn first. Blood culture and metal free tubes cannot be drawn during the same venipuncture, because trace metals from the blood culture septum will contaminate the metal free tube. See blood culture collection procedure for more information.	**Order of Draw**  

	2. Light blue top (sodium citrate) tubes must be full to ensure proper ratio of sodium citrate anticoagulant to blood. This is essential for test(s) accuracy. Insufficiently filled tubes will be rejected. 3. Metal-free tubes must be drawn prior to other tubes. To maintain order of draw if may be necessary to do a separate venipuncture when drawing a metal-free tube containing EDTA.	
9	**Discontinue Venipuncture:** 1. Release Tourniquet and withdraw last tube (if using Vacutainer system). 2. Place clean gauze over the site (no pressure), withdraw needle and activate safety on needle. 3. Apply pressure to the site. Apply pressure to the extended arm (do not bend).	
10	**If a syringe system was used:** 1. Remove needle and attach safety transfer device 2. In order of draw, insert tube in holder to allow vacuum to draw required amount of blood into tube. Do not force blood into the tube as hemolysis may result. 3. Mix all tubes gently 8 – 10 times **Do Not Shake!**	
11	**Label all specimens in the presence of the patient following specimen labeling policies:** 1. Patient Legal First and Last Name (as on requisition) 2. 2nd Identifier; Patient Date of Birth, Medical Record #, last 4 of Social Security # (as on requisition) 3. Collection Date & Time Use computer labels when available, labeling tubes vertically so they can be read left to right from the cap. **Pretransfusion specimens must have the following additional information:** 1. Patient Legal Name (as on wristband) 2. Medical Record 3. Collection Date & Time 4. Collector's initials *Note: If collector does not utilize the LIS barcode system for patient identification and labeling. Pretransfusion specimens must be labeled by hand with permanent ink.*	 Pretransfusion specimens that do not meet labeling requirements will be rejected for the patient's safety.
12	**Perform special handling instructions when applicable:** 1. Place specimen in water slurry 2. Place specimen on warm pack 3. Protect specimen from light	

13	**Examine puncture site:** 1. Check to be sure bleeding has stopped 2. Apply bandage 3. If excessive bleeding occurs, continue to apply pressure until bleeding stops, then tightly bandage.	
14	**Dispose of waste:** 1. Safely dispose needle and/or syringe in SHARPS® container. 2. All other contaminated apparatus may be disposed in regular waste. 3. If saturated with blood or body fluids dispose in medical waste.	
15	**Dispose of protective gloves and wash hands.**	

Special Notes:

Never perform venipuncture on the following sites:

- ✓ Above an IV (contaminates and/or dilutes blood specimen impacting results)
- ✓ Hematomas
- ✓ Skin lesions, warts, moles, or ganglia
- ✓ Edematous areas
- ✓ From an arm on the side a mastectomy was performed, without a physician order
- ✓ Extensively scarred areas
- ✓ From an arm in which a canula, fistula, or vascular graft has been placed
- ✓ From an arm in which blood is being infused
- ✓ From a foot without prior clinical written approval

A venipuncture site in the vicinity of an IV should always be **below the IV** or from another appendage. If the only site is above the IV, call the main laboratory for instructions on how to collect specimen.

Avoid inserting needle completely through vein as hematoma may result.

Avoid accidental arterial puncture. To assure selection of a venous site, always check vein to make sure there is no arterial pulsation.

Continued bleeding from venipuncture site may occur in patients with hemorrhagic tendency. Continue to apply pressure until bleeding stops, then tape lightly.

Occasional syncopy (fainting, nausea, dizziness) will occur. The appropriate response is:

- ✓ Discontinue venipuncture
- ✓ Lower the patient's head onto their knees or the drawing chair protective arm. Make certain the patient will not fall from the chair
- ✓ A cool wet cloth/towel or cold pack may be applied to the face or neck as the patient revives
- ✓ If the reaction is severe; fainting >30 minutes or accompanied by convulsions or seizures, contact physician immediately, call a CODE, or dial 911 depending on facility protocol.
- ✓ Do not use ammonia inhalants because asthmatic patients may develop respiratory distress.