



VENIPUNCTURE (INCLUDING ORDER OF DRAW)

PURPOSE

To standardize the process of drawing a blood sample.

VENIPUNCTURE PROCEDURE

Assess patient's ability to understand the process (e.g. language for non-English speaking persons, children, etc.). Adjust processes as needed based on age. Ask caregiver or persons accompanying patient for assistance.

Contact admissions or social worker for assistance with language barriers.

DO NOT proceed with venipuncture if the patient refuses.

- Use STANDARD PRECAUTIONS.
 - A new pair of gloves must be worn, a new tourniquet used, and hands washed or sanitized between each patient.
1. Confirm patient identification following established procedures.
 2. Apply a tourniquet to the patient's extended arm and select the best vein. Swab the site with an alcohol prep pad.
 3. Select appropriate needle type and size.
 - Needle holder and needle are disposable and come prepackaged.
 - Butterfly Needle
 - a) Remove the needle from the sterile package.
 - b) Twist the rubber sheathed puncture end onto the holder or remove it and twist the hub onto a sterile syringe.
 - c) Remove the plastic needle shield and discard.
 - d) Hold the wings with the needle bevel up.

***BUTTERFLY USAGE NOTE*: If a light blue sodium citrate tube (used for coagulation studies) is to be drawn, the tubing must be cleared of air before filling the tube. This can be done by drawing or filling a no additive waste tube (red with clear plastic top) first as a discard.

4. "Fix" the vein in position and with the needle at an acute angle, quickly penetrate the skin and vein.

5. Puncture the tube stopper by pushing the tube forward. This initiates the vacuum suction.
6. The tourniquet should be released as soon as possible. If it takes longer than 1 minute to select the vein and perform the venipuncture, remove the tourniquet. Then start again. Remove the tourniquet as soon as possible without interrupting the blood flow.*

*Hemoconcentration will occur. Cholesterol, potassium, and hematology values increase significantly if tourniquet is applied for 3 - 5 minutes.

7. Allow each tube(s) to fill until the vacuum is exhausted before withdrawing the tube from the holder. Use the chart below to determine proper order of draw and the proper inversion. Tubes should be inverted while other tubes continue to be filled.

Order to draw	Tubes	Inversion (number of times)
1	Blood Culture Bottles	8 – 10
2	Light Blue (citrate)	3 – 4
3	Red or Gold	5
4	Green	8 – 10
5	Lavender	8 – 10
6	Pink (EDTA)	8 – 10
7	Gray	8 - 10

8. If using a butterfly – push the black button prior to removing needle from arm to activate the safety mechanism.
9. Remove the entire assembly from the arm when completed. Activate the needle safety device. Place a dry gauze pad over the venipuncture site and withdraw the needle carefully.
10. Engage the safety device and discard entire needle assembly.
11. **Label all tubes with the patient's name, DOB, date of collection, and initials of collector. The patient's name and DOB on the specimen must match the patient's name and DOB on the laboratory requisition.**
12. Complete the requisition form. (see separate procedure)
13. Place specimen tubes in a plastic biohazard specimen bag with the requisition form in the outside pocket of the bag.

Venipuncture will not be performed in the following situations:

1. Non-emergency in-patients and ER patients not properly identified with a NLH wristband.
2. Patient who refuses to have blood drawn.

3. From a limb with an IV that is open. The laboratory will draw below an IV site after an IV is closed for three (3) minutes.
4. The arm of a patient with a cannula, fistula or vascular graft.
5. The arm on the same side as mastectomy surgery.
6. If the patient is receiving a blood transfusion (blood may be drawn 30 – 60 minutes after completion of transfusion).
7. From any leg or foot veins.

Note: The laboratory staff do not draw from any catheter, cannula or IV line, or from arteries.

If Phlebotomist is unable to draw a venous sample:

1. Microcollection methods will be used if acceptable for the required tests.
2. Notify Charge RN if sample cannot be obtained (Inpatient – Notify Charge RN. Outpatient – Notify provider’s office).

Time Sensitive Sampling:

Therapeutic Drug levels - for accurate testing, peak and trough levels must be drawn at the correct interval. For outpatients, the level will be drawn as close to the appropriate interval as practical.

Pediatric Venipunctures:

Child Less than 18 Months Old:

1. The phlebotomist will look for veins, and attempt the venipuncture if confident.
2. The venipuncture may be attempted a second time, or a second phlebotomist will attempt to draw.
3. If unsuccessful, then,
 - a. Inpatient – Notify Charge RN.
 - b. Outpatient – Notify provider’s office.

Procedure:

For all patients under 14 years of age, please see the chart below for “Recommended Pediatric Volumes.”

Recommended Pediatric Volumes

Weight lb.	Weight kg (approx.)	Maximum Amount to be Drawn at Any One Time (ml)	Maximum Amount of Blood During a Given Hospital Stay (< 1 mos)
6 – 8	2.7 – 3.5	2.5	23
8 – 10	3.5 – 4.6	3.5	30
10 – 15	4.5 – 6.8	5	40
16 – 20	7.3 – 9.1	10	60
21 – 25	9.5 – 11.4	10	70
26 – 30	11.8 – 13.6	10	80
31 – 35	14.1 – 15.9	10	100
36 – 40	16.4 – 18.2	10	130
41 – 45	18.6 – 20.5	20	140
46 – 50	20.9 – 22.7	20	160
51 – 55	23.2 – 25.0	20	180
56 – 60	25.5 – 27.3	20	200
61 – 65	27.7 – 29.5	25	220
66 – 70	30.0 – 31.8	30	240
71 – 75	32.3 – 34.1	30	250
76 – 80	34.5 – 36.4	30	270
81 – 85	36.8 – 38.6	30	290
86 – 90	39.1 – 40.9	30	310
91 – 95	41.4 – 43.2	30	330
96 - 100	43.6 – 45.5	30	350

Reference:

<http://www.drgreene.org/body.cfm?id=21&action=detail&ref=1616>

BD Vacutainer Order of Draw for Multiple Tube Collections 06-2004