

SOP

Venipuncture

Department of Medicine
Faculty of Medicine
UWUSL

Standard Operating Procedure (SOP) on Venipuncture

Title

Venipuncture

Issued By

Department of Medicine, Faculty of Medicine, Uva Wellassa University of Sri Lanka

1. Purpose

To ensure safe, aseptic, and accurate collection of venous blood samples for diagnostic purposes while minimizing patient discomfort and complications.

2. Scope

This SOP applies to all medical students, nurses, and healthcare staff performing venipuncture in clinical and teaching settings.

3. Responsibilities

3.1) Medical Officers

- Supervise and ensure adherence to SOP.

3.2) Medical Student

- Perform procedure under supervision of a trained professional.

3.3) Health Care Staff

- Perform procedure according to guidelines.

3.4) Laboratory Personnel

- Ensure proper sample handling and processing

4. Indications

- 1) Laboratory investigations (e.g. FBC, blood glucose, renal function tests)
- 2) Blood cultures
- 3) Therapeutic monitoring

5. Contraindications

- 1) Local infection at puncture site
- 2) Limb with arteriovenous fistula
- 3) Post-mastectomy arm
- 4) Severe oedema or burns (Relative Contraindication)
- 5) Severe bleeding disorders (e.g. Haemophilia)

6. Procedure

6.1) Assemble equipment

Before starting the procedure, gather all necessary equipment and place it on a tray or trolley:

- Arrange items so they are within easy reach
- Ensure everything is clearly visible
- Keep the workspace clean and organized

Required equipment

1. Sample collection supplies
 - Laboratory sample tubes (stored dry and upright in a rack)



Sterile glass or plastic tubes with rubber caps



Vacuum-extraction blood tubes



Glass tubes with screw caps

2. Personal protective equipment



Well-fitting, non-sterile gloves

3. Blood collection devices



Needles and syringes (various sizes)

4. Procedure aids



Tourniquet



Alcohol hand rub



70% alcohol swabs (for skin disinfection)



Gauze or cotton wool balls (to apply after puncture)

5. Documentation & labelling



Laboratory specimen labels



Writing equipment (e.g., pen/marker)

Blood Test Lab Request Form	
Requester lab information	
Requester name	Laboratory location
Requester information	
Physician name	Employee ID
Phone	Fax
Medical practice address	
Patient information	
Name	Age
Gender	Sex
Date of birth	Address
Attending physician Clinical department/division/clinic	
Sample details	
Sample ID	Collection date
Collected by	Collection time
Employee ID	

Laboratory request forms

6. Transport & disposal



Leak-proof transport bags/containers



Puncture-resistant sharps container

Safety positioning tips

- Keep the sample tube rack close to you (the health worker)
- Place it away from the patient to prevent accidental tipping or contamination

6.2) Patient identification and preparation

1. Introduce and identify

- Introduce yourself to the patient.
- Ask the patient to state their full name (do not rely only on charts or others).
- Verify that the laboratory form matches the patient's identity to ensure accurate identification.

2. Assess patient history

- Ask if the patient has:
 - Any allergies
 - Phobias (e.g., fear of needles)
 - History of fainting during injections or blood draws

3. Address comfort and anxiety

- If the patient appears anxious or afraid:
 - Reassure them calmly
 - Ask what would help them feel more comfortable

4. Position the patient

- Help the patient into a comfortable position, preferably lying down (supine) if possible.
- Place a clean paper or towel under the arm to maintain hygiene.

5. Explain and request consent

- Clearly explain the test to be performed in simple terms.
- Ensure the patient understands the procedure.
- Request verbal consent before proceeding.

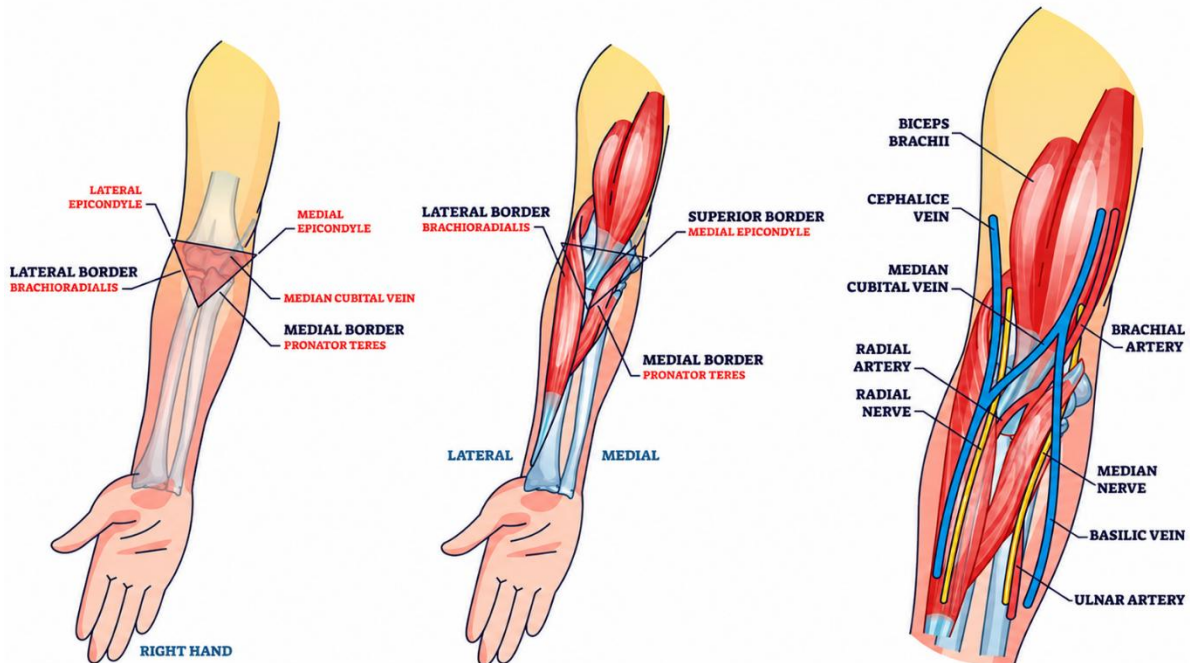


6.3) Site selection for venipuncture

1. Extend the patient's arm and inspect the antecubital fossa or forearm.

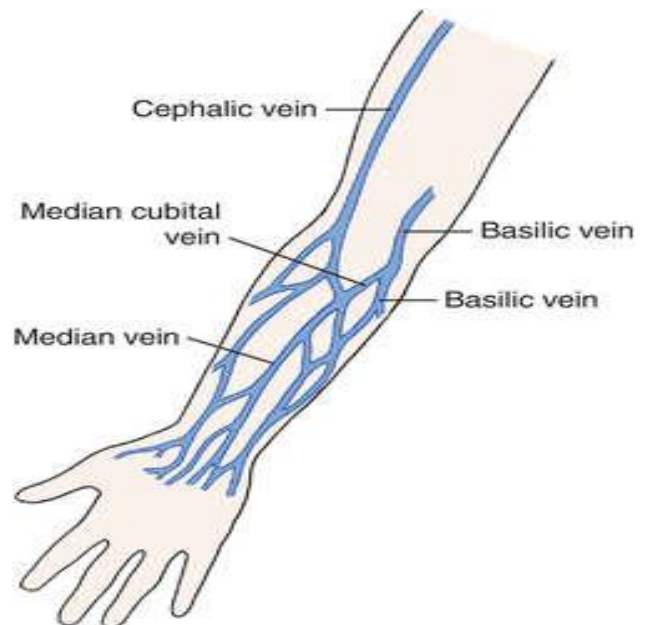
- Select a vein that is visible, straight, of good size and clear (not scarred or hardened)
- Prefer the median cubital vein (easiest and safest).

ANTECUBITAL FOSSA



2. Locate the vein before applying the tourniquet and use vein size to help choose the correct needle.

- Be cautious with the basilic vein and dorsal hand veins (risk of nerve and artery injury, more painful).
- Do not puncture at vein branching points (diverting veins) due to the risk of hematoma formation



3. Apply tourniquet 4–5 finger widths above the site and re-check the vein after applying the tourniquet.



In Hospitalized Patients

- Do not draw blood from an existing peripheral IV line due to the risk of,
 - haemolysis
 - contamination
 - dilution by IV fluids
 - drug interference
- Central venous lines are used only by trained staff with protocols due to the risk of contamination and inaccurate results

6.4) Perform hand hygiene and put on gloves

1. wash hands with soap and water, and dry with single - use towels, **or** if hands are not visibly contaminated, clean with alcohol rub (use 3 ml of alcohol rub on the palm of the hand, and rub it into fingertips, back of hands and all over the hands until dry).



2. After performing hand hygiene, put on well fitting, non-sterile gloves.



6.5) Disinfect the entry site

1. Clean the entry site with a 70% alcohol swab for about 30 seconds,

- Apply firm but gentle pressure, cleaning from the center of the venipuncture site outward (spirally) to cover an area of at least 2 cm, and avoid touching the site afterward.

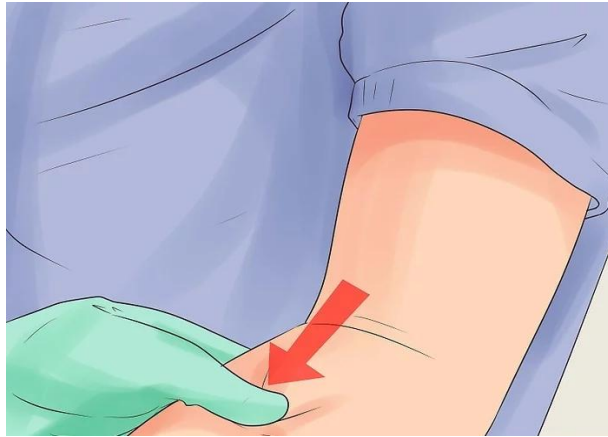
2. Allow it to dry completely for another 30 seconds.

- If the site is touched, repeat the disinfection, as inadequate contact time or contamination can affect results.



6.6) Take blood

1. Anchor the vein by holding the patient's arm and placing your thumb below the venipuncture site.



2. Ask the patient to make a fist to make the veins more prominent.



3. Insert the needle quickly at an angle of 30° or less and advance it along the vein at the easiest angle of entry.



4. Once enough blood is collected, release the tourniquet before removing the needle, then gently withdraw the needle

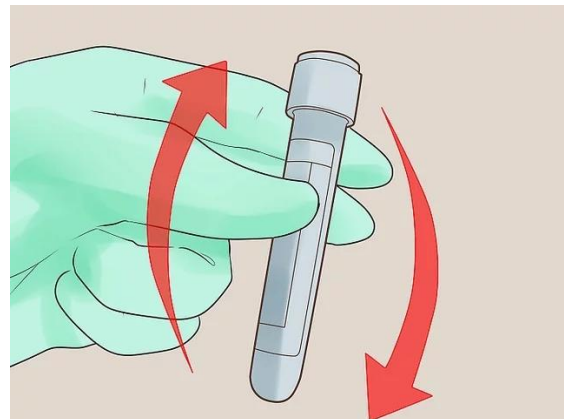


5. Gently, apply pressure with gauze, and ask the patient to keep the arm extended and raised without bending to prevent a hematoma.



6. Fill the laboratory sample tubes

- Fill the blood tubes gently using a vacuum tube or syringe while keeping them in a rack and handling the needle safely.
- Following laboratory instructions, invert the sample gently to mix the additives with the blood before dispatch.



7. Discard the used needle, syringe, or blood sampling device immediately into a puncture-resistant sharps container (strictly no recapping), and dispose of other items in the appropriate waste category.



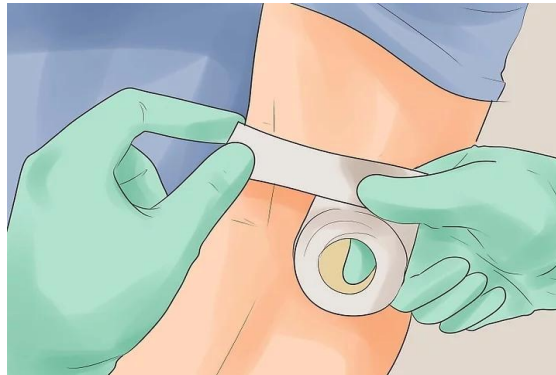
8. Check that all labels and forms are accurate, including patient details and collection time, and recheck them before dispatch.



9. Remove gloves and place them in the general waste. Perform hand hygiene. If using soap and water, dry hands with single-use towels.



10. Inform the patient that the procedure is complete, tape the gauze to the puncture site after the bleeding has stopped. Instruct the patient to keep the gauze on for about 15 minutes. Then thank and reassure them before they leave.



7) Post Procedure Care

1. Pack laboratory samples in a leak-proof plastic bag with a separate outer compartment for the request form to prevent contamination, and place multiple tubes in a rack or padded holder to avoid breakage during transport.



2. In case of blood or body fluid spills, wear appropriate protective equipment, clean up the spill, and disinfect the area using suitable bleach solutions depending on the surface, allowing adequate contact time.



3. If exposure to blood occur, report the incident according to guidelines, and ensure proper preparation of fresh disinfectant solutions and availability of a spill kit during transport. Additionally, any accidental needle prick injury must be treated as a high-risk exposure, reported immediately, and managed according to post-exposure protocols.

8. Reference

WHO Guidelines on drawing blood

Prepared by:

Dr. Warsha De Zoysa
Senior Lecturer
Department of Medicine
Faculty of Medicine
University of Ruhuna

Dr. Sudath Abeywickrama
Head of the Department (Acting)
Department of Medicine
Faculty of Medicine
Uva Wellassa University of Sri Lanka

Snr. Prof. Muditha Vidanapathirana
Dean
Faculty of Medicine
Uva Wellassa University of Sri Lanka

Dr. Hashini Gunawardana
Temporary Demonstrator
Department of Medicine
Faculty of Medicine
Uva Wellassa University of Sri Lanka

Date of Implementation

09.04.2026