

# Standard Operating Procedure (SOP): Selection and Preparation of Blood Collection Site

This SOP details the **selection and preparation of blood collection site**, including identifying appropriate veins or arteries, ensuring site cleanliness, applying antiseptic techniques, and minimizing patient discomfort and contamination risk. The protocol aims to guarantee safe, efficient, and aseptic blood collection for accurate diagnostic results and patient safety.

## 1. Purpose

To establish a standardized method for selecting and preparing the site for blood collection, ensuring patient safety and specimen integrity.

## 2. Scope

This SOP applies to all healthcare professionals responsible for obtaining blood samples from patients for clinical laboratory analysis.

## 3. Responsibilities

- All staff performing blood collections must follow this protocol.
- Supervisors must ensure proper training and compliance.

## 4. Materials Required

- Sterile gloves
- Tourniquet
- Antiseptic swabs (e.g., 70% isopropyl alcohol or chlorhexidine)
- Sterile gauze
- Blood collection devices (e.g., needles, vacutainer, syringes)
- Adhesive bandages/tape
- Sharps disposal container

## 5. Procedure

### 1. Patient Identification and Preparation

- Confirm patient's identity using two identifiers (e.g., name and date of birth).
- Explain the procedure and obtain verbal consent.
- Position the patient comfortably with the arm extended and supported.

### 2. Site Selection

- Prefer the antecubital fossa (median cubital vein) for venipuncture.
- If not accessible, consider cephalic or basilic veins. For arterial collection, use radial artery following specific protocols.
- Avoid sites with infection, scarring, edema, hematoma, intravenous lines, or recent procedures.

### 3. Application of Tourniquet

- Apply the tourniquet 7–10 cm above the intended puncture site, avoiding excessive pressure or prolonged application (<1 minute).
- Ask the patient to make a fist (do not pump the fist).

### 4. Site Preparation

- Wear sterile gloves.
- Clean the site with an antiseptic swab in a circular motion from the center outward for at least 30 seconds.
- Allow the site to air dry completely.
- Do not touch the cleaned area after application of antiseptic.

### 5. Blood Collection

- Proceed with blood collection using standard technique.
- Release the tourniquet as soon as blood flows into the collection device.

### 6. Post-Collection Care

- Apply sterile gauze to the site and ask the patient to apply gentle pressure.
- Secure with adhesive tape or bandage as necessary.
- Properly dispose of sharps and contaminated materials.

## 6. Precautions

- Strict aseptic technique must be maintained throughout the procedure.
- Minimize patient discomfort by selecting the best site and using gentle technique.
- Observe for signs of adverse reaction during and after collection.

## 7. Documentation

- Record the date, time, collection site, and any complications or observations.
- Label samples immediately and accurately at bedside.

## 8. References

- Clinical and Laboratory Standards Institute (CLSI) – Collection of Diagnostic Venous Blood Specimens.
- WHO Guidelines on Drawing Blood: Best Practices in Phlebotomy.