**Cornell University Standard Operating Procedure (SOP)- Capillary Blood Collection (finger stick)**

**PROTOCOL TITLE:** Click here to enter text.

**PI NAME:** Click here to enter text.

**Definition:** Capillary Blood Collection is the collection of blood from a finger involving a lancet and capillary collection tube.

# Possible Risks to Participants:

Capillary blood collection may cause discomfort, bruising, excessive bleeding or infection at the puncture site.

# Equipment and Supplies:

Non‐Latex Exam Gloves, Hand Sanitizer, Alcohol Swab/Pad, Lancet (such as Owen Mumford, Unistick 3 –Extra Heavy), capillary blood collection tube, Band‐Aid, sterile and non‐ sterile gauze pads, and a Sharps Container.

# Any individual performing capillary blood collection from human participants in research must:

1. Be approved to perform capillary blood collection by Cornell Health Occupational Medicine (see: [qualification requirements list](https://www.irb.cornell.edu/documents/OccMed%20Qualification%20Requirements%20–%20Finger%20Stick.pdf))
2. Be current in Bloodborne Pathogen Training provided by Environmental Health and Safety
3. Be named on an IRB protocol and have completed training on research with human participants required by the Cornell IRB
4. Have another individual present at the time of the procedure

# Procedures:

1. Assemble all equipment and supplies (see Equipment and Supplies above), and list of participants with any assigned participant identification numbers.
2. Wash hands thoroughly and put on exam gloves. When multiple participants are having a capillary blood collection, exam gloves should be changed between participants, and hand sanitizer should be used each time gloves are changed.
3. Confirm the identity of the participant by asking their name and the protocol title or number and confirm that they have given consent.
4. Explain the procedure and that the participant can end the procedure at any time for any reason.
5. Ask the participant to wash his hands with warm water and soap.
6. Position the participant so they are seated or reclined comfortably.
7. Choose a puncture site on the 3rd (middle) or 4th (ring) finger of non‐dominant hand, free from callouses, visible infection or wound. Choose a position slightly off center from the central fleshy portion of the fingertip, to the side of the fingertip center. If using a blade‐type puncture device, a location perpendicular to the fingerprint whorls usually yields the best results.
8. If the chosen puncture site is cold, warm it for approximately 3 minutes using a warm moist washcloth to increase blood flow to the area.
9. Cleanse the chosen puncture site using an alcohol swab/pad (70% isopropyl alcohol) and allow the site to completely air dry before proceeding. DO NOT touch the site again.
10. Grasp the participant’s finger firmly with your non‐dominant hand. Hold lancet between the thumb and forefinger of your dominant hand perpendicular to the skin surface, placing the opening for the blade firmly against the skin at the desired puncture site. Depress the plunger with your index finger and then release the plunger allowing the blade to retract. Remove device from puncture site and discard the lancet in the designated sharps container.
11. Wipe away the first drop of blood with a sterile gauze pad (this drop may contain an excess of tissue fluids that could cause erroneous results). Continue holding the finger, applying gentle pressure as needed, and collect specimen. Blood flow can be enhanced by holding the puncture site in a downward position. Under NO CIRCUMSTANCES should strong repetitive pressure (milking) be applied, as this could cause hemolysis and/or contamination of the specimen.
12. Collect the specimen in the appropriate container and handle according to manufacturer’s instructions (Approx. 10 microliters).
13. Apply direct pressure to the puncture site with a clean gauze pad and slightly elevate to stop bleeding. Then apply a band aid to the puncture site.
14. Remove gloves.
15. Wash hands or use hand sanitizer if between multiple participants.
16. Provide the participant with a Capillary Blood Collection Information Sheet.

# Dealing with Excessive Bleeding:

1. If excessive bleeding occurs, apply firm pressure at the site for several minutes.
2. If the bleeding is not controlled call 911 or ask a colleague to call 911 (the individual placing the call should follow the directions for calling emergency responders posted in the room they are calling from. If a colleague is available the colleague should then go to the front of the building to help guide emergency personnel to the room).
3. File an Unexpected Event Report:

* If the person performing the procedure is not the PI for the study, immediately inform the PI of the incident and ensure that the procedures outlined in the protocol are followed.
* Within 24 hours of the incident, either the person performing the procedure or the PI should complete an [Unexpected Event Report](https://irb.cornell.edu/documents/Unexpected%20event%20report%20form.doc) and submit it to the IRB ([irbhp@cornell.edu)](mailto:irbhp@cornell.edu)) and the medical oversight physician/occupational medicine ([gannettoccmed@cornell.edu](mailto:gannettoccmed@cornell.edu)).
* The physician lead for medical oversight/occupational medicine will assess the provided information and involve other institutional contacts if necessary. If there is an urgent need for consultation, the participant may be contacted by phone.
* The occupational medicine staff and the IRB will coordinate any follow-ups with the PI and the facility staff, including a need for additional action or corrective changes in research procedures and/or the handling of the event.
* The incident report and any follow-up actions will be presented to the IRB at a convened meeting. The IRB may require further action from the research team or occupational medicine personnel.

# Capillary Blood Collection Information Sheet

\*\*Please keep this information sheet accessible until the collection site has fully healed.\*\*

# Care of Your Collection Site

Keep the band‐aid over the puncture site dry for several hours, until the site has had adequate time to heal.

# Potential Complications

The risk of infection following capillary blood collection is minimal, but should be taken seriously. Swelling, tenderness, redness, or warmth at site could potentially occur.

If you experience any of the above signs, you should contact your primary care provider for advice. If you do not have a primary care provider, proceed to the Convenient Care Center or the Cayuga Medical Center Emergency Room for attention.

You should also notify the PI Click here to enter text: PI name and contact info of any problem so that they can file the appropriate reports within Cornell University.