

**SALEM HOSPITAL
SALEM, OREGON 97309**

Department: Phlebotomy	TITLE: CAPILLARY PROCEDURES/ HEELSTICK
Area: Phlebotomy	Effective Date: 12/13/90
Authored By: Cindy Humphrey, Diane Duncan	Revised: 10/15/00, 10/10/03
Policy #: B2	
Attachments:	Date removed from service:

PURPOSE:

Capillary heel sticks are done on babies 6 months of age or less. If the baby walks, it is too old for a capillary heel stick and a venipuncture is to be done. Capillary sticks may also be on fingers when no veins are accessible and the quantity of blood required for testing can be obtained by capillary stick. (See Capillary Procedure/Fingerstick (B3)).

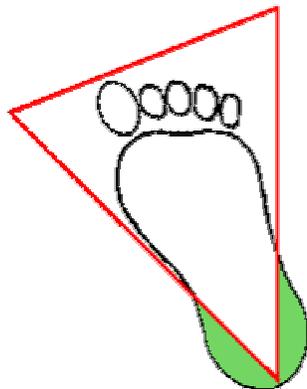
MATERIALS

1. Infant Heel warmer
2. Tenderfoot (Heel incision device)
3. Capillary Blood Collection system
 - a. Green Top (Lithium Heparin)
 - b. Lavender Top (EDTA)
 - c. Red Top (No Additive tube)
4. 2x2 Gauze Sponge
5. Alcohol Prep (70%)
6. Band-Aid
7. Exam Gloves

PREPARATION:

1. Review all orders and determine the type and quantity of specimen required for the tests requested. Consult the minimum volume list and follow the guidelines. The volumes listed are bare minimum and must be met in order for the requested tests to be performed.
2. Before entering the nursery, scrub hands and forearms thoroughly using the germicidal soap provided. Rinse and dry hands using paper towels.
3. Locate the baby:

- a. Most capillary samples are to be drawn in the mother/babies room.
 - b. If a venipuncture is needed the babies may be taken into the Special Care Nursery.
 - c. If the baby is under phototherapy lights (Bili lights), the lights must be turned off before obtaining a specimen. The results in some specimens may be altered if left on. Turn the lights back on when you are finished.
4. Positively identify the baby by comparing the information of the request slip with the baby's armband, (Ref. Positive ID 2.25). Newborn babies have two armbands, one with the mother's information and one with their own information. The baby's armband is located on the baby's wrist and the mother's on the baby's ankle.
5. Choose the site for puncture. Capillary blood may be obtained from:
- a. The lateral or medial plantar heel surface. A tenderfoot device is used.
 - b. The plantar surface of the big toe.



The puncture site must not be edematous, as accumulated tissue fluid will contaminate the blood specimen.

The puncture must not be performed on the posterior curvature of the heel.

Do not puncture through previous sites. This will increase the risk of infection.

6. The baby's heel must be warmed for 3-5 minutes at a temperature no higher than 42C. This is essential when drawing for capillary gases. (See warming procedure B4).
7. Use only gentle massage when obtaining blood. Excessive massaging (milking) dilutes the blood with tissue fluids and may also cause hemolysis. Squeezing the foot may also cause bruising.

PROCEDURE:

1. Gloves are to be worn with each procedure.
2. Blood collection items and labels are not to be placed on top of the baby's isolette.
3. Cleanse the area with a sterile 70% Isopropyl alcohol prep. The site must be completely dried with a sterile gauze pad before the skin is punctured, as alcohol will cause rapid hemolysis.
4. Have a secure hold on the foot. Puncture the site using the Tenderfoot lancet. CAUTION: Tenderfoots cannot be used for fingersticks.
 - a. Remove the Tenderfoot lancet from its pack, taking care not to touch or rest the blade slot end on any non-sterile surface.
 - b. Remove the safety clip. Once the safety clip is removed, do not push the trigger or touch the blade slot.
 - c. Carefully select a safe incision site. Place the blade slot surface flush against the heel so that its center point is vertically aligned with the desired incision site.
 - d. Ensure that both ends of the device have made light contact with the skin and depress the trigger.
 - e. Remove the tenderfoot from the heel.
5. Wipe away the first drop of blood with a sterile gauze pad. The first drop is likely to be contaminated with tissue fluid.
6. Allow the drop of blood to form at the puncture site. Allow the blood to flow into the collection tube by capillary action. Touch the tip of the tube or collection device to the drop of blood and do not "scoop" the blood from the skin. Blood flow from the site is enhanced if the puncture site is held downward and gentle continuous pressure is applied to the surrounding tissue.
7. The baby's heel may be punctured a maximum of two times in order to obtain the volume of blood needed. If it is necessary to puncture a second time, use a new tenderfoot and a new site.
8. Check with the baby's nurse to see if a PKU sample is needed before finishing up your site.
9. Once the blood has been obtained, hold a clean gauze pad over the puncture site until the bleeding stops. Cover the puncture site with a spot Band-Aid.
10. Wash your hands and wear new gloves for each baby drawn.

NOTES:

If a standard puncture has been performed, for most newborns, 0.5 to 0.8 ml. of blood can be collected from a single puncture site.

When collecting capillary specimens for CBC's it is very critical that the EDTA collection container be mixed carefully during the collection process. Additionally, once the blood has been collected, it is important that the specimen be mixed very well in order to prevent clotting or platelet clumping. Hold the container between two fingers and mix vigorously with an end to end motion.

Venipunctures are performed on newborns under certain circumstances. Blood cultures and coagulation test must be collected by venipuncture. If the volume of blood needed is large due to the number of tests requested, venipuncture can be considered. Always place the baby on a blanket on the counter to do your venipuncture. 23g-25g needle are best for drawing newborns. Never leave a baby unattended.

When a blood gas and other test are ordered always draw the capillary blood gas first. Have the sample taken to the laboratory for testing immediately.

LIMITATIONS OF PROCEDURE:**SOURCES OF SAMPLE ERROR:**

1. Clotted Sample – Caused by inadequate mixing of the specimen with anticoagulant after collection.
2. Hemolyed Specimen.
3. Sample drawn in the wrong tube type.
4. Insufficient Sample Drawn.

REFERENCE:

National committee for Clinical Laboratory Standards, 1998.
International Technidyne: [See Package insert](#)
Becton-Dickenson: [See package insert](#)

[Distribution of Procedure:](#)

Com 1
DOS
Keizer Outpatient Lab
Phlebotomy department
869 Medical Center Drive
Outpatient/Donor Room
Urgent Care

PROCEDURE ACCEPTANCE AND REVIEW	
VALIDATED BY:	DATE:
SECTION SUPERVISOR:	DATE:
ADMIN. DIRECTOR:	DATE:
PATHOLOGIST:	DATE:
Reviewed Annually By:	DATE:
	DATE:
	DATE:
	DATE: