

**DORSAL HAND VEIN SAMPLE COLLECTION FROM NEONATES**

- St. Joseph Medical Center Tacoma, WA
- St. Francis Hospital Federal Way, WA
- St. Clare Hospital Lakewood, WA
- St. Anthony Hospital Gig Harbor, WA
- St. Elizabeth Hospital Enumclaw, WA
- ENUM
- GIGL
- PSC

**PURPOSE**

To provide instruction for the safe collection of venous blood samples using the dorsal hand vein of a neonate.

**BACKGROUND**

This procedure is an alternative procedure to heelsticks on newborns. Priority must be given to preservation and maintenance of the dorsal hand veins for intravenous therapy and/or blood transfusion. Therefore, this procedure should only be used on **well** babies. If in doubt, ask a nurse if IV therapy will be needed before performing the dorsal collection. Dorsal vein collections must **only** be performed by fully trained personnel.

**EQUIPMENT**

- 23 gauge x 3/4 inch needle with transparent hub - Caution: this needle does not have a safety mechanism
- 70% alcohol prep pad
- Dry gauze pad
- Microtainer tubes appropriate for the tests ordered or completely filled out PKU card

**STEPS**

Hand hygiene must be performed before and after patient contact. Wash hands or use antiseptic gel prior to gloving, and following glove removal.

1. Positively identify the patient by actively comparing 2 patient identifiers from the patient armband or requisition against the sample labels.
2. Select the baby’s hand with the most visible veins. Usually if the baby’s left hand is held by the phlebotomist’s left hand (or right to right), the procedure is more effective.
3. Apply a “tourniquet affect” by placing your index and middle fingers around the baby’s wrist.
4. Using your thumb against the fingers, curl the baby’s fingers inside your grip and bend the baby’s wrist down to examine and palpate the distended veins on the back of the hand. **NOTE:** Do not overextend the wrist. Never make a puncture unless you can see or feel a vein. If a hand vein is not apparent perform a heel stick.
5. “Brush-feel” the back of the baby’s hand with your index finger to locate the vein to use. Once the site of venipuncture is located, release your fingers as a tourniquet and allow the blood to re-circulate.
6. Reapply the finger-tourniquet and fold the fingers and hand down with your thumb. Cleanse the area with alcohol. Allow to air dry. **DO NOT BLOW ON THE SITE.**

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7. Using a 23 gauge needle with the bevel pointing up, align it at approximately a 10-12 degree angle to the surface of the skin.
8. Puncture the skin 3-5 mm below the vein, then advance the needle to enter the vein slowly and carefully. Babies' veins are much more superficial than those of adults. As soon as blood appears in the hub of the needle, stop advancing the needle.
9. As soon as blood fills the hub, collect it into a microtainer or onto a PKU card as needed. EDTA microtainers should be the first filled to reduce the chance of clotting, when multiple tubes will be drawn.
10. To maintain a steady flow of blood, apply gentle, intermittent pressure to the hand using the finger-tourniquet technique.
11. After the blood collection is complete, place a clean gauze or cotton ball on the venipuncture site and quickly withdraw the needle.
12. Apply steady pressure until the bleeding stops – usually 1 to 2 minutes. Do not peek at the venipuncture site until pressure has been applied for at least 1 minute to prevent a hematoma or bruising, which may affect whether this site could be used again.  
**Remember:** Band-aids must never be placed on the venipuncture site as they pose a choking hazard for the infant.
13. Remove all equipment from the bedside.
14. Dispose of needles and sharps into the appropriate containers.
15. Label all samples according to laboratory policy.

**REFERENCE**

Clagg, E.: Venous Sample Collection from Neonates Using Dorsal Hand Veins, Laboratory Medicine, 1989; 20(4): 248-253.

<b>DOCUMENT APPROVAL Purpose of Document / Reason for Change:</b>			
5/24/12 – Updated format, header, all sites added. Other minor edits.			
<b>Committee Approval Date</b>	5/24/12	<b>Medical Director Approval (Electronic Signature)</b>	5/22/12 <i>Linda D. Burkhardt, M.D.</i>