

Blanchard Valley Health System
Laboratory Services

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Skin Puncture Procedure (LTR27558)

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Timestamp: 9/29/2015 9:52:25 AM)

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10:39:21 AM)

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7:51:56 PM)

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3:31:54 PM)

Last Approved Time: 9/29/2015 9:52:26 AM

Revision: 2.02

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Skin Puncture Procedure

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PRINCIPLE:

Although venipuncture is the most frequently performed phlebotomy procedure, it is appropriate in some circumstances to utilize a skin puncture method. Current laboratory instrumentation and procedures make it possible to perform laboratory tests on microsamples of blood obtained by skin puncture (finger stick or heel stick) on both pediatric and adult patients. Locating superficial veins large enough to accept even a small gauge needle is difficult in children and veins that are available may need to be reserved for intravenous therapy. Therefore, the finger stick method is often the method of choice for collecting some tests from this age group. In adults, the finger stick method may be required because of the inability to locate a suitable vein in some patients.

POLICY

Finger punctures may be performed on those over 1 year of age.

Heel puncture is generally performed on children younger than one year of age or children that are not walking.

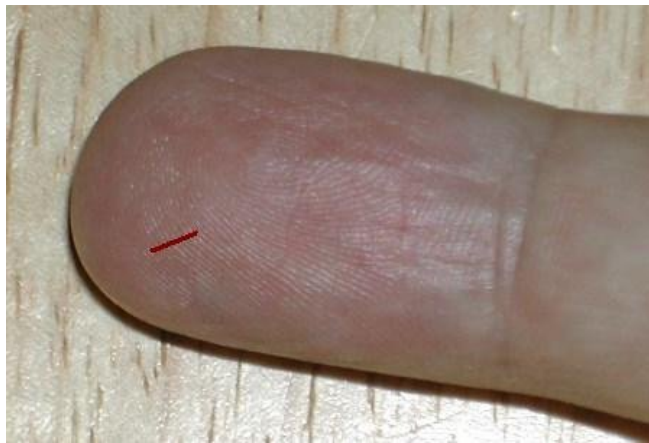
PROCEDURE:

ORDER OF DRAW: The order of draw for all skin puncture procedures using microtainers is as follows:

- EDTA (Lavender)
- Li Heparin (Hep Gel)
- Red Top

FINGER PUNCTURE

1. Select the puncture site. The area chosen for capillary puncture should be free of scars, bruises, or rashes. Do not choose an area that is swollen or edematous because that blood sample would be too diluted with interstitial fluid. The distal end of the third or fourth finger is the most commonly used site. The very tip of the finger should not be punctured because there is a greater chance of puncturing bone as the bone is close to the skin surface. Puncture the fleshy pad on the end of the finger, slightly off center. The incision should be perpendicular to the lines of the fingerprint to help the blood flow into the collection container rather than under the fingernail.



2. The selected site may be warmed with an infant heel warmer prior to performing the puncture if necessary.
3. Cleanse the puncture site with alcohol and allow to air dry. Any remaining alcohol can cause rapid hemolysis of blood and cause a burning sensation at the puncture site. Betadine should not be used. Betadine contaminated blood may falsely elevate levels of potassium, phosphorus, uric acid and bilirubin.
4. Puncture the skin with a finger puncture device, and wipe off the first drop of blood as this may contain intracellular and interstitial fluid.
5. Collect the blood into the required collection container(s). Blood should be freely flowing from the puncture site as a result of firm pressure and should not be obtained by excessive squeezing. The drop of blood should roll down the side of the tube- do not scrape the collection scoop on the site. The most satisfactory blood flow is obtained by alternately applying and releasing pressure to the area. Avoid touching the puncture site and scraping the collection device against the skin, as this will produce specimen contamination and hemolysis.
6. Work quickly to minimize the chance of microclots forming in the tube. Always fill the tubes to the indicated level on the tube beginning with EDTA (lavender) tubes, followed by all other types of microtainers. Mix each collection tube by gently tapping and inverting it.
7. Once you have collected the specimen(s), apply adequate pressure until the blood flow has stopped. Apply a bandage to the site.
8. Label the specimen with correct patient information.

HEEL PUNCTURE

1. Select the puncture site. Do not choose an area that is swollen or edematous because that blood sample would be too diluted with interstitial fluid.
2. Warm the puncture site with an infant heel warmer.
3. Cleanse the puncture site with alcohol and allow to dry, remaining alcohol can cause hemolysis of blood. Betadine should not be used. Betadine contaminated blood may falsely elevate levels of potassium, phosphorus, uric acid and bilirubin.
4. Puncture the skin in one continuous, deliberate motion in a direction almost perpendicular to the foot. In order to reduce the possibility of hitting bone, the puncture site should be off to either side of the heel avoiding the very center. The first drop may contain an excess of intracellular and interstitial fluid and should be wiped off.
5. Collect the blood into the required collection container(s). Blood should be freely flowing from the puncture site as a result of firm pressure and should not be obtained by excessive squeezing. The drop of blood should roll down the side of the tube- do not scrape the collection scoop on the site. The most satisfactory blood flow is obtained by alternately applying and releasing pressure to the area. Avoid touching the puncture site and scraping the collection device against the skin, as this will produce specimen contamination and hemolysis.

6. Work quickly to minimize the chance of microclots forming in the tube. Always fill the tubes to the indicated level on the tube. Mix each collection tube by gently tapping and inverting it.
7. Once you have collected the specimen(s), apply adequate pressure until the blood flow has stopped. Apply a bandage to the site.
8. Label the specimen with correct patient information.

REFERENCES

Slockbower, J.M., and Blumenfeld, T.A., Collection & Handling of Laboratory Specimens. 1983.