# Finger Stick Method for Blood Lead Screening

*(Not recommended for children less than 1 year of age.)*
FOLLOW CDC RECOMMENDED UNIVERSAL PRECAUTIONS FOR OBTAINING BLOOD

It is important that the blood circulates freely in the finger sampled. DO NOT USE fingers with tight rings. The patient's fingers should be straight, but not tense, to avoid the stasis effect which occurs when the fingers are bent. The middle finger is recommended for use to obtain the best blood flow.

*For children less than one year of age, use the heel for a puncture site.*

**Purpose**: Detect lead exposure.

For accurate test results, environmental lead contamination must be avoided. Use clean white paper towel as a work surface as recycled or colored towels can contain trace levels of lead.

**Equipment**:

- disposable gloves
- alcohol swab
- dry sterile gauze pads
- sterile lancet
- microtubes (250 microliters)
- appropriate laboratory request form

**Procedure**:

1. Explain to the parent the reason for the test and how important it is to the child's learning ability to have the test done.
2. Wash your hands and put on clean gloves
3. Thoroughly clean the child's hands with soap and warm water; rinse well, then dry the hands. Remember to use clean white paper towels as recycled or colored towels can

contain trace levels of lead. (Once washed, the finger to be punctured must not be allowed to come into contact with any surface.)

4. Grasp the finger that has been selected (usually the middle finger) for puncture between your thumb and index finger with the palm of the child's hand facing up.
5. If not done during washing, massage the fleshy portion of the finger gently.
6. Clean the ball or pad of the finger to be punctured with the alcohol swab. Dry the fingertip using the sterile gauze.
7. Grasp the finger and quickly puncture it with a sterile lancet in a position slightly lateral of the center of the fingertip. The cut should be perpendicular to ridges of the skin. Ask the child to hang her/his arm down or assist her/him to do so to permit the steady flow of unclotted blood into the tube.
8. Dispose of the lancet in an appropriate biohazard waste container, e.g., sharp container.
9. Wipe off the first droplet of blood with the sterile gauze or cotton ball. (The first drop of blood contains tissue fluids that will produce inaccurate results.)
10. Hold the puncture site downward and gently apply pressure to the surrounding tissue to enhance blood flow. Strong repetitive pressure (milking) should be avoided as it may cause hemolysis or contamination of the specimen with tissue fluid.
11. Continuing to grasp the finger, touch the tip of the collection container to the beaded drop of blood. Collect the second and third drops of blood in the microtube and mix with the EDTA in the tube to prevent clotting. Continue collecting blood and periodically mixing the blood with the EDTA throughout the collection until 250 microliters are collected.
12. Once the required amount of blood is collected, cap the tube and rock it 8-10 times to further mix the blood with the EDTA.
13. Apply a bandaid when appropriate (it is not advisable to apply a bandaid over skin puncture sites in children less than two years old. Adhesive bandages in infants can irritate the skin. An older infant may remove the bandage, put it in the mouth, and possibly aspirate it.)
14. Send sample to the lab for analysis.

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