

Blood Lead Collection

Which sample type to use?

Blood lead tests fall into three main types:

Test type	Draw/Sample Type
Screening	Capillary or Venous
Confirmatory	Venous*
Monitoring	Venous*

*Note: Do not use Point of Care (i.e. Lead Care II) devices for confirmatory testing or monitoring (NO VENOUS BLOOD ON LEAD CARE DEVICES). A second capillary specimen collected within 12 weeks may be used to confirm an initial capillary level < 10 µg/dL.

Avoiding lead contamination

To minimize false positive results:

- Be careful when selecting gloves and towels. Some **gloves and recycled paper towels** have been found to contain lead and pose a risk of contamination.
- Wash child's hands thoroughly and **allow to air dry**. Do not dry with paper towels.
- **Jewelry** (on the patient, the parent, or the person performing the blood draw) has been found to contain lead and could contaminate the specimen. All jewelry (including watches) should be removed and hands washed before putting on gloves and drawing a sample.

Other items can cause lead contamination:

- Dust from vents, open windows or doors
- Keys or key rings
- Cell phones, sunglasses
- Other items children play with or chew on

Specimen Labeling

Information to include on lab requisition:

- Patient Name
- Patient Address
- Patient Phone
- Patient Gender
- Patient Birth Date
- Patient's Employer Contact Info (*adults 16+ only*)
- Provider Name
- Provider Address
- Provider Phone
- Date of Collection
- Draw/sample type (capillary, venous)

Be sure that draw/sample type is included on the label (**C** for capillary, **V** for venous). **Recommend:** Write "Use certified lead-free tube" (e.g., tan top or royal blue top) on lab requisition. Any other tube must have been confirmed lead-free.

See video on collecting blood lead specimens on Centers for Disease Control and Prevention (CDC) web site: CDC Guidelines for Collecting and Handling Blood Lead Samples (2004) www.cdc.gov/nceh/lead/training/blood_lead_samples.html

For more information, contact the Oklahoma Childhood Lead Poisoning Prevention Program at (800) 766-2223 or visit our web site at <http://lpp.health.ok.gov>.

Use the Proper Collection Container

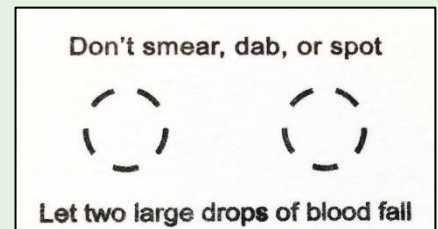
Must be proven lead-free

Capillary Samples



Several manufacturer-certified tube types available

Capillary Microcollection Container
Top color: **Usually Lavender**
Use: **May use if certified by manufacturer for lead testing**
Anticoagulant: EDTA



Capillary Filter Paper
Use: **Lead analysis if certified by manufacturer for lead testing.**

Venous Samples



Top color: **Tan**
Use: **Lead analysis**
Anticoagulant: **EDTA or Heparin¹**



Top color: **Royal Blue**
Use: **Trace metals analysis**
Anticoagulant: **EDTA or Heparin¹**

¹know in advance the acceptable anticoagulant for your analyzing lab

Capillary Sampling Protocol

Materials Needed:

- Soap
- Sterile cotton balls or gauze pads
- Examination gloves
- Lancets
- Alcohol swabs (*can be eliminated if using a surgical or other disinfectant soap*)
- Lead-free microcollection containers
- Adhesive bandages
- Gloves & other personal protective equipment
- Biohazard waste container & sharps disposal container

Before selecting equipment for use in blood collection, consult the laboratory about its requirements. The laboratory may recommend or supply suitable collection equipment and may precheck it for lead contamination.

Specimen Collection:

1. Don examination gloves and other necessary PPE.
2. Wash the child's hands thoroughly with soap and water, and then allow them to air dry. Ensure the child does not touch anything after his/her hands have been washed.
3. Grasp the finger for puncture between your thumb and index finger with the palm of the child's hand facing up.
4. Clean the ball or pad of the finger to be punctured with the alcohol swab. Dry the fingertip using the sterile gauze or cotton ball.
5. Grasp the finger and quickly puncture it with a sterile lancet in a position slightly lateral to the center of the fingertip.
6. Wipe off the first droplet of blood with a sterile gauze or cotton ball.
7. If blood flow is inadequate, gently massage the proximal portion of the finger and then press firmly on the distal joint of the finger.
8. A well-beaded drop of blood should form at the puncture site. Do not let the blood run down the finger or onto the fingernail.
9. Continuing to grasp the finger, touch the tip of the collection container to the beaded drop of blood.
10. Draw the blood into the container maintaining a continuous flow of blood.
11. When the container is full, cap or seal it as appropriate.
12. Agitate the specimen to mix the anticoagulant through the blood.
13. Check that the container is properly labeled, and place it in an appropriate storage area.
14. Stop the bleeding, and cover the finger with an adhesive bandage.

Important Notes:

- Puncturing the fingers of infants less than one year of age is NOT recommended. Puncturing of the heel may be more suitable for these children.
- Decontamination of the puncture site with an alcohol swab only is NOT sufficient to remove lead dust. Hand washing is necessary to remove any potentially contaminating lead dust.



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