BLOOD COLLECTION PROTOCOL (HOME)

Materials Needed

- A disposable lancet device. Blade depth: 2.0mm; blade width: 1.5mm retractable sharps to reduce the possibility of inadvertent needle stick;
- A microcontainer that hold 200 – 500 uL whole blood.with K2 EDTA additive
- Capillary tubes kits
- A dropper-like apparatus that holds the capillary tube for sample collection and releases it into the microtainer;
- Alcohol swabs. If a surgical or other disinfectant soap is used, alcohol swabs can be eliminated;
- Sterile cotton balls or gauze pads;
- Examination gloves;
- Adhesive bandages;
- Trash bags suitable for medical waste and containers for sharps. Bags containing medical waste should be clearly identified as such;
- Storage and mailing containers (provided by the Boston Children's Hospital central lab). Since specimens require shipment, follow the FedEx or other appropriate regulations for the transport of body fluids;

There will be a label placed upon the microtainer which will note the subject's study ID#, and date of collection.

Overview of Procedures

The procedure for (centralized) capillary sample collection involves the following:

1. Prepare supplies by getting a capillary tube, microtainer, and dropper device from kit.
2. Place the capillary tube into the tweezer-like end of the dropper device.

3. Clean the finger with an alcohol pad
4. Allow finger to dry in order to avoid stinging related to fingerstick puncture with alcohol on the tip of the finger
5. Ready the disposable lancet.
6. Prick the fingerstick and wipe off the first drop of blood with a gauze pad
7. Lightly squeeze the finger to allow a second drop to form and apply any end of the micro liter capillary tube tip to the drop. The blood will enter the tube by capillary action.
8. Open the microtainer and release the capillary tube into the microtainer.
9. Close the microtainer top and gently shake
10. Apply label to the microtainers.
11. Refrigerate the microtainer prior to mailing to the central laboratory
12. Mail the samples within 5 days of collection to the Boston Children's Hospital laboratory by overnight mail delivery, preferably with morning delivery, as noted on the lab form
13. Include a cool pack in the sample box in order to ensure stability of the sample during the mailing procedure
14. Mailings should be done Monday through Thursday only and NOT before any legal holiday.
15. Sample labels and packing slips denoting the date and the subject number will be provided by the home office.

Step-By Step Procedures

Prepare the Child's Finger

1) Select examination gloves. If necessary, rinse them to remove powder.
2) Wash the child's hands thoroughly with soap and warm water, and then dry them with an appropriate towel (NOT NEEDED IF THE ALCOHOL PAD IS USED).
3) Make sure the hand and finger are warm to the touch. If not, rub gentle, ask child to swing arm around, run in warm water again, whatever is necessary to promote blood flow.
4) Grasp the finger that has been selected for puncture between your thumb and index finger with the palm of the child's hand facing up.
5) If not done during washing (see preceding notes), 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 or cotton ball.

Puncture the Finger and Form Drops of Blood

1) Grasp the finger and quickly puncture it with a sterile lancet in a position slightly lateral to the center of the fingertip.
2) Wipe off the first droplet of blood with a sterile gauze or cotton ball.
3) If blood flow is inadequate, the lancet may not have been held sufficiently close to the finger so the procedure will need to be repeated with a new lancet. Try to gently message the proximal portion of the finger and then press firmly on the distal joint of the finger.
4) A tiny drop of blood should form at the puncture site.
5) Do not let the blood run down the finger or onto the fingernail.

Fill the Collection Container

1) Continuing to grasp the finger, touch the tip of the collection capillary tube to the beaded drop of blood.
2) Draw the blood into the capillary tube.
3) When the tube is full, place it in the microtainer provided.
4) When possible, repeat steps 1 through 3 to fill a second capillary tube.
5) Mildly agitate the specimens.
6) Check that the container is properly labeled, and place it in an appropriate storage area.
7) Stop the bleeding, and cover the finger with an adhesive bandage. Bleeding should stop quickly. If bleeding is slow to stop, apply pressure to the puncture site with a sterile gauze or a cotton ball.
8) Place collected and labeled blood samples back into a Styrofoam rack (to provide stability during shipment). When packaging samples, please wrap the tubes with absorbent material (i.e., blue hospital pads or newspaper) and secure with tape.
9) Samples, either in microtainers or tubes, should be placed in leak-proof container (“zip-lock” type bag) and then stored with cool gel-pack – NO ICE. The sample should not freeze. Samples can be refrigerated until time of mailing when they are then placed in the Styrofoam mailing kits.
10) Check with your shipping vendor for specifications and limitations.
11) Specify overnight mail with first morning delivery. Shipments can only be sent Monday-Thursday and NOT before any holiday or weekend.

The Next Generation Health Study

Blood Collection Script

Hello. My name is _____ and I am a health researcher from the NEXT Generation Health Study team. Today we are going to take a small sample of your blood. We will use this sample to test for signs of heart disease (e.g., cholesterol, triglycerides, blood sugar levels, etc). The test results will be sent to your home once they are available.

First, I need to know the last time you ate or drank anything.

[Document if the student has had food or drink in the 8 hours prior to the assessment]

Now I am going to prepare to stick your finger so that I can collect a small amount of blood. What hand do you write with? We want to stick a finger on your "non-dominant hand", so if you are right-handed we will stick a finger on your left hand.

First, if your hands are cold can you please rub them together to warm them up? OR Please hold this warmer in your hand so that your fingers warm up.

[Provide a hand warmer if necessary]

Now I am going to clean your finger with a small amount of alcohol.

[Clean the student's fingertip in accordance with the guidelines given in the protocol]

Now I am going to stick the side of your fingertip. You will hear a clicking noise and then feel a small pinch. Please hold and squeeze this stress ball in your other hand while I am doing this.

[Collect a blood sample in accordance with the guidelines given in the protocol]

Great job! Your part is all done.