

STANDARD OPERATING PROCEDURE

Collection of Fingertip Blood Samples from Adult Research Study Participants

SOP ContAct-002

SOP created: November 8, 2016
Approved by: Clinical Research Ethics Committee
Approved: February 7, 2017

A. PURPOSE AND BACKGROUND

Performing a procedure on tissue below the dermis is considered a [controlled act](#). This SOP describes the procedures for phlebotomists to collect fingertip blood samples from adult study participants (i.e., age 17 and older). A separate SOP is to be followed for youth and children.

B. PROCEDURES/STUDY PROTOCOL

1. The phlebotomist informs the participant the procedure is most often performed on the ring finger of the non-dominant hand to minimize interference with daily routines and asks the participant which finger they prefer the blood to be drawn from.
2. Participants may be asked to warm their hands in warm water and/or keep their hands below the waist and/or massage the fingers to increase blood flow to the fingers.
3. The participant is asked to sit in a position that provides the phlebotomist access to the finger and is comfortable for the participant.
4. The finger identified by the participant is cleaned with an alcohol wipe and allowed to dry. The alcohol needs to dry to ensure the area is disinfected and less discomfort for the participant (i.e., stinging feeling).
5. Blood samples are collected using a single-use safety lancet. To take the blood sample, the phlebotomist punctures the skin in the fleshy part of the finger pad approximately 1 cm from the tip of the finger between the midpoint and side of the finger.
6. The first blood sample is wiped away with cotton. The subsequent blood sample is collected either by paper strips or capillary tubes depending on the biochemical analyses to be performed.
7. Upon completion of the blood draw, cotton is pressed on the fingertip and the participant is asked to sit still and apply pressure to stop the bleeding and reduce the risk of bruising.
8. The phlebotomist disposes of the lancet directly into the sharps disposal.

9. Once the bleeding has subsided or stopped, a bandage is applied over the puncture and the participant is asked to sit quietly for up to 10 minutes.
10. The phlebotomist informs the participant there may be bruising at the site of the puncture for the next few days. The phlebotomist also informs the participant to keep the puncture area clean and dry to promote rapid healing.
11. The participant is thanked for their participation.

C. EQUIPMENT

- Single-use safety lancets
- Paper strips and/or capillary tubes
- Box of nitrile/vinyl gloves (Do not use latex gloves due to allergies/sensitivities.)
- Alcohol wipes
- Cotton balls/swabs
- Bandages

*Disposable, single use materials or equipment are to be used whenever possible and any reusable materials or equipment must be cleaned and disinfected with alcohol-based sanitizers before use with another participant

D. DESCRIPTION TO STUDY PARTICIPANTS

1. Each individual (i.e., study participant) is asked in-person, by telephone, or by email if they are:
 - comfortable having blood drawn, and
 - allergic/have sensitivities to rubbing alcohol.
2. Individuals who indicate they are uncomfortable with the procedure and/or are allergic/sensitive to rubbing alcohol will be asked not to participate in the study.
3. In the information-consent letter participants must be informed:
 - a. blood will be drawn by a trained and experienced phlebotomist who has been delegated to conduct the procedure by a physician.
 - b. the procedure will require wiping an area of the skin with rubbing alcohol and pricking the finger pad with a device that is similar to the fingertip prick device often used by diabetics for routine blood glucose testing.
 - c. they can ask any questions they may have about the procedure at any time or ask to stop the procedure at any time.

E. RISKS

1. PARTICIPANTS

- Bruising at site of lancet puncture.
- Feelings of lightheadedness or fainting.

- Risk of infection if puncture site is not kept clean.

2. RESEARCHERS

- In the event of a mucous membrane blood exposure or needle stick injury, UWaterloo Health Services posted procedures for post exposure management for blood-borne pathogens to follow: <http://www.healthservices.uwaterloo.ca/menu/occupationalhealth/bloodexposure.htm>

F. SAFEGUARDS/SAFETY PROCEDURES

- Phlebotomist is to have completed:
 - First Aid/CPR training
 - UWaterloo Safety Office lab safety training: See <https://uwaterloo.ca/safety-office/training/training-programs>
- Universal precautions are to be applied at all times. Refer to the Canadian Public Health Association universal precautions guidelines: <http://www.cpha.ca/uploads/portals/idp/19661e.pdf>
- Phlebotomist must follow UWaterloo Safety Office guidelines on use of personal protective equipment and specifically use of gloves. See <https://uwaterloo.ca/safety-office/programs-and-procedures/personal-protective-equipment>
- A new pair of disposable nitrile/vinyl gloves are used with each participant. Gloves are for single-procedure use only. Gloves should always be removed using a glove-to-glove or skin-to-skin technique to prevent contaminating the hands. Gloves are to be disposed in an appropriate container.
- The use of gloves does not replace the need for hand hygiene. Before undertaking the blood draw and handling the paper strips and/or capillary tubes, the phlebotomist washes hands thoroughly with soap and warm water or an alcohol-based sanitizer. Hands are to be properly washed before the gloves are put on and after the gloves are removed. Hand hygiene is also needed before and after the replacement of gloves during a procedure or in between tasks.
- It is recommended the phlebotomist has protective eyewear, a mask or face shield, and a gown during any procedure where droplets of blood or other body fluids may be produced.
- Participants will be asked to sit still and apply pressure to stop the bleeding and reduce the risk of bruising.
- Participants will be asked to sit quietly for up to 10 minutes to reduce the risk of lightheadedness or fainting.

G. REFERENCES

Public Health Ontario (2013). *Best Practices for Cleaning Disinfection and Sterilization of Medical Equipment/Devices in all Health Care Settings, 3rd edition*. Retrieved on July 16, 2015 http://www.publichealthontario.ca/en/eRepository/PIDAC_Cleaning_Disinfection_and_Sterilization_2013.pdf

Public Health Ontario. (2015). *Infection Prevention and Control for Clinical Office Practice*. Retrieved on July 16, 2015 http://www.publichealthontario.ca/en/eRepository/IPAC_Clinical_Office_Practice_2013.pdf

University of Waterloo Office of Research Ethics. (2013). *Human Participant Research Guidelines: Controlled Acts and the Delegation of Controlled Acts*. Retrieved on November 17, 2016 https://uwaterloo.ca/research/sites/ca.research/files/uploads/files/controlledactguidelines_access_check_done.pdf