

**Faculty of Health Guideline:
FINGER PRICK BLOOD SAMPLING**

TITLE:	FINGER PRICK BLOOD SAMPLING
DATE OF REVIEW:	October 21, 2022; Updated February 13, 2023
REVIEWED BY:	FoH APP Budget <input checked="" type="checkbox"/> FoH Faculty Council <input checked="" type="checkbox"/>
APPROVED BY:	FoH APP Budget <input checked="" type="checkbox"/> FoH Faculty Council <input checked="" type="checkbox"/>

A. PURPOSE

Finger prick blood sampling method is used when only a small sample is required for analysis. It is commonly used in physiology to measure glucose level.

B. SCOPE AND APPLICABILITY

1. This protocol does not apply to venous or arterial blood sampling.
2. This operating protocol refers to all instances in which capillary blood microsamples are taken following pricking of one or more fingers. Typical analytical determinations from the samples blood include glucose levels via hand held, rapid response micro analyzers.
3. The micro analyzers and sampling devices (lancets, Nova-Stat glucose meter glucometers) are commercial and approved devices that do not require medical prescription.
4. Training is provided on Learning Hub (BC Health Authority approved site for learning/training) on the procedure itself and how to use the glucometer. Training must be completed on Learning Hub prior to practicing in the FOH lab setting by all health participants and faculty.

C. RESPONSIBILITIES

1. The main aim of this protocol is to ensure the safety of the tested individuals as well as the testing personnel and anyone who might inadvertently come in contact with the associated equipment and materials. More specifically, the aim is to ensure that blood from a tested individual is not carried over, coming in contact with another individual

during or following the testing procedure. The risks of blood-borne pathogen transmission are described in Appendix 1, below.

D. MATERIALS AND EQUIPMENT

1. It is recommended that all testing equipment and materials are stored and transported in a carrying case. Equipment may include:
 - 1.1 Micro or hand-held analyzer (Glucometer).
 - 1.2 Analyzer-associated sampling devices (e.g., test-strips).
 - 1.3 Lancets.
 - 1.4 Protective gloves.
 - 1.5 2x2 Gauze.
 - 1.6 Alcohol swabs (typically, 70% isopropyl alcohol).
 - 1.7 Biohazard waste and sharps disposal containers (see Appendix 3, below).
 - 1.8 Hand sanitizer
 - 1.9 Disinfectant wipes

E. PROCEDURE

1. Prepare an uncluttered work area where testing will take place.
2. Wear protective gloves and disinfect the work area.
3. Remove gloves.
4. Perform hand hygiene
5. Arrange equipment/materials in a practical, ergonomic manner.
6. Wear protective gloves.
7. With any blood sampling technique, there is a risk of the participant fainting at the sight of the lancet, or the sight of blood. Ensure that the participant is comfortably sitting such that there is minimal risk of injury in the event of a fainting spell. If the participant begins to lose color, begins to sweat excessively, or shows other signs of feeling faint, discontinue immediately and terminate the procedure. For more on the risk of fainting, please see Appendix 2 below.
8. Turn on the micro or hand-held analyzer and set it up with the test strip in place, so it is ready for the micro blood sample.
9. Disinfect the area of the finger that will be used for pricking. Common areas are the finger pads or side of the finger near the nail bed. Clean area for 60 seconds and allow to air dry. Do not blow on the area to dry it faster.
10. If applicable, set the lancet for the appropriate pricking depth. Twist the cap and then gently pull the cover.

11. Apply the lancet device to the pricking site with moderate pressure and release the device's trigger.
12. Sample the blood when a sufficient amount has developed for the test stick to pick up the amount of blood needed (1.2uL).
13. Apply a clean gauze to the pricked site and instruct the participant to hold it there until bleeding ceases (~30-90 seconds). If bleeding continues apply a bandage. Discard bloody gauze in biohazard container.
14. Discard lancet into the biohazard sharps disposable container.
15. Read and record the analyzer's reading.
16. If any bodily contamination occurs, please follow instructions outlined in Appendix 4, below.
17. Clean and disinfect micro or hand-held analyzer with approved disinfectant wipes and place it back on the charging dock. Clean and disinfect the micro hand-held analyzer after every patient test.
18. Clean and disinfect work area.

F. REFERENCES

Brock University Finger Price Blood Sampling Guidelines (April 2016). Retrieved from <https://brocku.ca/research-at-brock/wp-content/uploads/sites/73/SOP02-Finger-Prick-Blood-Sampling-edit.pdf>

CDC (August 23, 2010). CDC Clinical Reminder: Use of Fingertick Devices on More than One Person Poses Risk for Transmitting Bloodborne Pathogens. Retrieved Oct 21, 2022, from [CDC Clinical Reminder: Use of Fingertick Devices on More than One Person Poses Risk for Transmitting Bloodborne Pathogens | Injection Safety | CDC](#)

Learning hub (CCRS Integrated). Learning Hub blood glucose meter – Nova Statstrip training. Course code: 22130

G. APPENDICES

1. Risk of transmission of blood-borne pathogens:

Blood-borne pathogens, such as HIV, Hepatitis B Virus (HBV), and Hepatitis C Virus (HCV), can be transmitted through contact with infected human blood (as well as other body fluids). Note: infected individuals might be asymptomatic carriers of the pathogen, who are not necessarily aware of the infection, nor show any signs or symptoms of disease. It is therefore necessary to avoid contact with blood, even when it comes from apparently healthy individuals.

HIV, HBV, and HCV can be transmitted in many ways. The following are relevant to finger pricking sampling:

- a. Accidental puncture from contaminated lancets
- b. Contact of blood residues or blood-contaminated equipment (e.g., lancing devices, gloves) with broken/damaged skin (e.g., open sores, cuts, abrasions, acne, blisters, sun-burns), or mucous membranes (e.g., eyes, nose, mouth).

2. Risk of participant fainting

As stated above in the methods, many participants can unexpectedly feel faint or actually lose consciousness with the sight of the lancet or at the sight of blood. It is important that the health student is aware of signs and symptoms of fainting and how to deal with such adverse events.

It is important that the health student ensures that the participant is comfortably seated before beginning to avoid any injury that may happen with a fall. The health student must be vigilant for signs of discomfort in the participant to avoid a full faint (e.g., loss of facial colour, sweating excessively, disconnectedness, distress), but must also keep in mind that fainting can happen without warning.

In the event that the participant does not feel well, terminate the procedure immediately and make sure that the participant rests comfortably until they are ready to leave the lab. The health student will notify faculty. The faculty will assess whether or not the participant needs to be accompanied home and should touch base with the participant later to ensure that there were no residual effects from the event. If the participant loses consciousness, faculty will follow protocol and call first aid attendant at Langley 604-599-3276. If faculty is busy assessing the participant, the faculty can ask one of the participants to call the first aid attendant. While waiting for the first aid attendant, faculty will assess to see if the participant is able to maintain their airways and have a pulse and place the participant in recovery position. The participant may require assistance to get home, and follow up communication is required by the faculty to ensure that the participant recovered from the event.

A reminder to faculty to report any adverse events within two business days to Occupational Health and Risk Management

<https://kpuemp.sharepoint.com/sites/hr/ohs/SitePages/Accident%20and%20Incident%20Reporting.aspx>

Faculty must also inform the Dean's office of the incident.

3. Disposal of bio-hazardous materials

Any material or equipment contaminated, or suspected as being contaminated with blood, and which could not or would not normally be disinfected, must be disposed of in an appropriate, University-authorized, bio-hazardous waste-disposal container, as follows:

- a. Used lancets and any object capable of penetrating the skin, must be disposed of in a Sharps Container.
- b. Any other materials that are soiled/contaminated such as cotton-balls, gauze pads, gloves, must be disposed of in bio-hazardous waste-disposal container. An exception to this can be made when only a limited amount of non-Sharps material must be disposed of, such as gauze, can be disposed of in the Sharps disposable container.
- c. All bio-hazardous waste-disposal containers shall be kept in a safe place in the lab educator's office until it is needed in lab. In the lab, the bio-hazard waste-disposal containers will be placed by the sink to prevent inadvertent mishandling by unauthorized persons. When full, or when further testing / waste generation is not foreseen for several weeks, containers shall be appropriately disposed of by authorized personnel.

4. What to do if bodily contamination did occur

- a. When intact skin has been contaminated with blood, clean and disinfect the site and the immediate surrounding area with cotton-ball/gauze soaked with 70% isopropyl alcohol.
- b. When non-intact skin has been contaminated with blood, clean the site by running the area under cold water and disinfect the site with cotton-ball/gauze soaked with 70% isopropyl alcohol and notify first aid. Once first aid is notified immediate go to the nearest emergency department to start blood-borne pathogen protocol.
- c. Any adverse event that occurs during the procedure must be reported by the faculty/staff to Risk and Occupational Health (within 24 hours). All incidents and accidents that result in a potential exposure to blood, as described in Appendix 1, must be promptly reported (within 24 hours, at the latest), using the University Injury/Incident Report form available at:
<https://kpuemp.sharepoint.com/sites/hr/ohs/SitePages/Accident%20and%20Incident%20Reporting.aspx>
Incidents must be reported as soon as possible (within 24 hours, at the latest). Do not delay submitting the form due to technicalities; missing signatures can be obtained later.



The individual who has been exposed will need to go to the nearest emergency department to start blood-borne pathogen protocol.