



Blood and Body Fluid: Exposure Control Plan
Revised November 2024

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Introduction and Purpose

UBC is committed to providing a safe and healthy environment for staff, faculty, and students. The purpose of the Blood and Body Fluid Exposure Control Plan (BBF ECP) is to outline the key responsibilities and establish expectations that will effectively reduce the frequency and severity of occupational exposure to blood, body fluids, or tissues which may carry bloodborne pathogens.

This exposure control plan applies specifically to UBC staff, faculty, and paid students. Unpaid UBC students are recommended to follow the procedures outlined by their educational program and are encouraged to follow-up with UBC Student Health Service or a local physician when an exposure has occurred.

Roles and Responsibilities

UBC Departmental Managers/Supervisors/PIs will:

- Determine employees at risk of occupational exposure to blood, body fluids, (BBF) and/or bloodborne pathogens in consultation with UBC Safety & Risk Services (SRS), Occupational & Preventive Health (OPH), and/or Joint Occupational Health and Safety Committee (JOHSC).
- Develop and update a list of tasks and procedures with the potential for BBF exposure using the **Blood Borne Pathogen Risk Identification Worksheet** (Appendix A). This must be documented and attached to your [RISe Biosafety Permit](#), if applicable to your work environment.
- Contact UBC Occupational and Preventive Health to initiate a process for confidential and personalized employee health risk assessments. This may include the provision of recommended immunizations, screenings, and titres.
- Provide training to employees, ensuring they have current Standard Operating Procedures (SOPs), and they are aware of the workplace exposure risks of working with blood, body fluids, and/or blood borne pathogens.
- Provide employees with the necessary materials, equipment, PPE, and other resources required to minimize exposure risk.
- If an exposure incident occurs, follow the **BBF Exposure-Supervisor Checklist** (Appendix E). Support exposed employees to receive immediate first aid and to proceed to the nearest Emergency Department as soon as possible following an exposure incident.
- Report an exposure to blood, body fluids, or bloodborne pathogens via the UBC [Centralized Accident Incident Reporting System \(CAIRS\)](#) within 48 hours of the incident.
- If the exposure incident involves a known source, provide the Source Person with the **Source Information Sheet** (Appendix F).

UBC Staff, Faculty and Paid Students at Risk for Exposure to BBF will:

- Maintain current knowledge surrounding changes to procedural practice, facilities, and products and equipment.
- Attend education and information sessions, both departmental and University required course updates.
- Complete a first assessment with UBC Occupational & Preventative Health (OPH). Consider the immunization and screening recommendations provided by OPH as an important preventive health and safety measure.
- Use control measures and follow safe work practices to eliminate or reduce their exposure to bloodborne pathogens.
- Report to supervisor all accident/injury incidents (this includes but is not limited to needlesticks, near misses, improperly disposed of syringes, etc.).
- Complete a UBC [Centralized Accident Incident Report System \(CAIRS\)](#) online within 48 hours of a workplace exposure to blood or body fluids (both the supervisor and employee need to fill out a report).
- Follow the **Exposed Person Checklist** (Appendix C) in the event of a BBF exposure.

Occupational & Preventive Health (OPH) will:

- Assist supervisors, managers, and Principal Investigators (PI's) in assessing workplace exposure risks.
- Provide overview of exposure management process and roles and responsibilities to those identified as being at potential risk.
- Provide pre-exposure Hepatitis B vaccinations and titres for immunity to those identified as having risk factors in the workplace.
- Follow-up on BBF exposure incidents that are reported via UBC CAIRS, providing clinical care as per the BC Centre for Disease Control Guidelines for [Blood and Body Fluid Exposure Management](#).
- Maintain a confidential Electronic Medical Record (EMR).

UBC Biosafety Committee and Safety and Risk Services Biosafety Office will:

- Distribute the current Exposure Control Plan where required.
- Ensure the workplace equipment and processes are inspected regularly.
- Oversee departmental compliance.
- Review all exposure incidents reported in CAIRS.
- Report to PHAC any reportable occupational exposure incidents.

WorkSafeBC Claims Associate will:

- Review exposure incidents in CAIRS (Centralized Accident and Incident Reporting System)
- Notify OPH of the exposure incident.
- File WSBC Claims promptly.

Hazard Identification

Tissues and Fluids Capable of Transmitting Bloodborne Pathogens

The following table is adapted from BC Centre for Disease Control Blood and Body Fluid Management and shows potential sources of blood borne pathogens such as Human Immunodeficiency Virus (HIV), Hepatitis B Virus (HBV), and Hepatitis C Virus.

FLUID	HIV	HBV	HCV
Blood and fluids visibly contaminated with blood	Yes	Yes	Yes
Semen	Yes	Yes	Yes, if blood is present
Vaginal/rectal secretions	Yes	Yes	Yes, if blood is present
Pleural, amniotic, pericardial, peritoneal, synovial and cerebrospinal fluids and inflammatory exudates	Yes	Yes	Yes
Saliva	No, unless contaminated with blood	Extremely low risk unless blood is present	No, unless contaminated with blood
Tissue, organs, and primary cells	Yes	Yes	Yes
Humanized Mice ¹	Yes	Yes	Yes
Breast milk	Yes	Plausible, particularly if nipples are cracked or bleeding or if the mother is HBeAg positive	Plausible, particularly if nipples are cracked or bleeding
Faeces, Nasal secretions, Sputum, Sweat, Tears, Urine, Vomitus	No, unless they contain visible blood.		

Transmission

Individuals are at potential risk of exposure to bloodborne pathogens through:

1. Percutaneous Exposure - needlestick injury/puncture wound or laceration with an object that is contaminated with human blood or body fluids.
2. Broken Skin - direct contact of human blood or body fluids with a broken area of skin.
3. Splash-type Exposure - mucous membranes of the eyes, nose, or mouth are potential ports of entry for pathogens carried in human blood or body fluids.
4. Aerosolization Exposure - procedures which cause airborne particulates of human tissue, bone, blood and body fluids should also be considered a risk for exposure to bloodborne pathogens. An example of this is the use of high-speed drills or saws on human tissue or bone.

¹ Humanized mouse exposures will be assessed by OPH Nurse for BBF exposure potential
 UBC BBF Exposure Control Plan Updated: November2024

Risk Assessment: UBC Employees at Risk

There are several occupational groups within the University that have a potential risk of exposure to blood and body fluids. The level of risk can be determined using the **Risk Assessment Worksheet** (Appendix B). The more “yes” answers there are, the greater the relative risk associated with the specific jobs or tasks.

Exposure Prevention

A variety of control procedures are used to minimize the risk of occupational exposure to bio-hazardous material. These involve:

Elimination or Substitution

Elimination of the hazard is the most effective procedure to control a hazard and reduce workplace risks. The next best choice is to substitute for a substance that is less hazardous.

Engineering Controls

Engineering controls are the preferred method of eliminating or reducing occupational exposure to any hazard when elimination and substitution are not feasible. Common examples include:

- Sharps containers
- Self-sheathing needles
- Bio Safety cabinets
- Splash guards

Administrative Controls

Training and Education

Trained and educated individuals have the knowledge required to eliminate potentially hazardous situations involving bloodborne pathogens. The education and training must be appropriate to the individual’s educational level, literacy, and language. It should include the following topics:

- Explanation of bloodborne diseases, their symptoms, modes of transmission, and long-term effects.
- Knowledge of this BBF ECP and SOPs and where to access them.
- Inventory of tasks and procedures that may expose the worker to bloodborne pathogens.
- Control measures to eliminate or minimize the risk of exposure.
- The role of the Occupational & Preventive Health unit in recommending and providing immunization and lab testing to help protect the worker from vaccine-preventable diseases before an exposure occurs and in follow-up to an exposure incident.
- Personal protective equipment, including availability, location, selection, use, limitations, care, cleaning and decontamination, inspection, maintenance, and storage.
- Emergency procedures in case of an exposure incident: getting first aid, medical attention, and reporting the incident.

Personal Protective Equipment (PPE)

PPE is required if engineering controls are unavailable, impractical, or do not eliminate occupational exposure to the hazards. Examples of PPE include full covering shoes, gloves, lab coat, long loose-fitting pants or skirt, and goggles. Employees must remove PPE before leaving the work area or whenever the PPE has become contaminated with blood or other potentially infectious materials. Used PPE must be placed in an appropriately designated area or container for storage, washing, decontamination, or disposal.

Occupational & Preventive Health

Occupational and Preventive Health (OPH) Nurse consultations are recommended for UBC employees who are at risk of exposure to human BBF and bloodborne pathogens. OPH assessment appointments are brief phone appointments where your risks will be reviewed and follow up vaccinations, tests, and screening may be offered as per the BC Centre for Disease Control Guidelines.

To schedule this appointment, call 604-827-4713 or email oph.info@ubc.ca.

Immunization for Hepatitis B

Hepatitis B vaccination is recommended for those who have occupational exposure risk to this virus. OPH provides this vaccine free of charge to those determined to be at risk.

WorkSafeBC Occupational Health and Safety [Regulation 6.39](#) states:

6.39 Vaccination

- (1) An employer must offer vaccination against hepatitis B virus to all workers who are at risk of occupational exposure to that virus.
- (2) If the *Communicable Disease Control Immunization Program Manual* issued by the BC Centre for Disease Control, as amended from time to time, lists a vaccine that protects against infection by a biological agent that is designated as a hazardous substance in section 5.1.1, the employer must offer the vaccination to all workers who are at risk of occupational exposure to that biological agent.
- (3) Vaccinations offered under subsections (1) and (2) must be provided without cost to workers.

[Enacted by B.C. Reg. 319/2007, effective February 1, 2008.]

Post-Exposure Follow-up

When advised of an exposure incident, OPH will contact the Exposed Person to arrange follow-up treatment and testing, which may include lab testing, accessing the lab results (including those of the Source Person's testing), updating vaccines where required, and recommending treatment.

References

BC Centre for Disease Control. (n.d.) *Bloodborne Diseases*. Retrieved October 22, 2024 from <http://www.bccdc.ca/health-info/disease-types/bloodborne-diseases>.

Work Safe BC: Controlling Risks. Retrieved from Work Safe BC website on Dec 1, 2024 at <https://www.worksafebc.com/en/health-safety/create-manage/managing-risk/controlling-risks>

Work Safe BC: OHS Regulation Part 6: Substance Specific Requirements. B.C. Re. 6.39 Vaccination [Enacted by B.C. Reg. 319/2007, effective February 1, 2008.] Retrieved from Work Safe BC website on October 22, 2024 at <https://www.worksafebc.com/en/law-policy/occupational-health-safety/searchable-ohs-regulation/ohs-regulation/part-06-substance-specific-requirements?origin=s&returnurl=https%3A%2F%2Fwww.worksafebc.com%2Fen%2Fsearch%23sort%3DRelevancy%26q%3Dregulation%25206.39%26f%3Alanguage-facet%3D%5BEnglish%5D&highlight=regulation%206.39#SectionNumber:6.39>



Appendix A: Blood Borne Pathogen Risk Identification Worksheet

Job/Task	Potential Source of Exposure						Route of Contact				Frequency of Contact ²			How to Mitigate the Risk	
	Blood	Body fluids	Tissues/Organs	Infected Animals	Cultures	Culture Media	Sharp	Bite	Mucous Membrane	Skin	Routine or Daily	Non-Routine or Monthly	Random or Yearly	Engineering Controls	Workplace Processes

² Routine/Daily = exposure anticipated during normal job.
 Non-Routine/Monthly = occasional exposure during normal job.
 Random/Yearly = rare exposure opportunity during normal job.



Appendix B: Risk Assessment Worksheet

JOB TASK Exposure and additional comments about severity or frequency of exposure	Likelihood (L)	Frequency (F)	Consequence (C)	Risk Score (LxFxC)	Risk Assessment Rating LOW, MODERATE, HIGH

LIKELIHOOD	SCORE
Most likely and expected result if the exposure takes place (high prevalence of pathogen)	10
Examine likelihood of exposure in relation to type of job task and circumstances that occur while job is being performed (Does the job task involve working with <i>potentially</i> hazardous material like human blood/body fluid, animal feces, etc.?)	6
Unusual sequence or coincidence	3
Combined circumstances create a <i>coincidence</i>	1
Remotely possible coincidence. Has never happened in many years	0.5
Practically impossible coincidence.	0.1
FREQUENCY - Potential exposure event occurs:	SCORE
Continuously (or many times daily)	10
Frequently (approximately once daily)	6
Usually (once per week to once per month)	3
Occasionally (once per month to once per year)	2
Rarely (never been known to happen)	1
Very rarely (not known to have occurred but considered remotely possible)	0.5
CONSEQUENCE - Degree of consequence if left untreated:	SCORE
Catastrophic: numerous fatalities, extensive damage	100
Several fatalities	75
Fatality	50
Extremely serious injury or occupational disease (permanent disability)	30
Disabling injuries, reversible damage	10
Short term illness and discomfort	2

Risk Assessment Rating Table

LOW			MODERATE					HIGH			
0	50	90	125	150	175	200	225	250	350	450	750+



Appendix C: BBF Exposure – Exposed Person Checklist

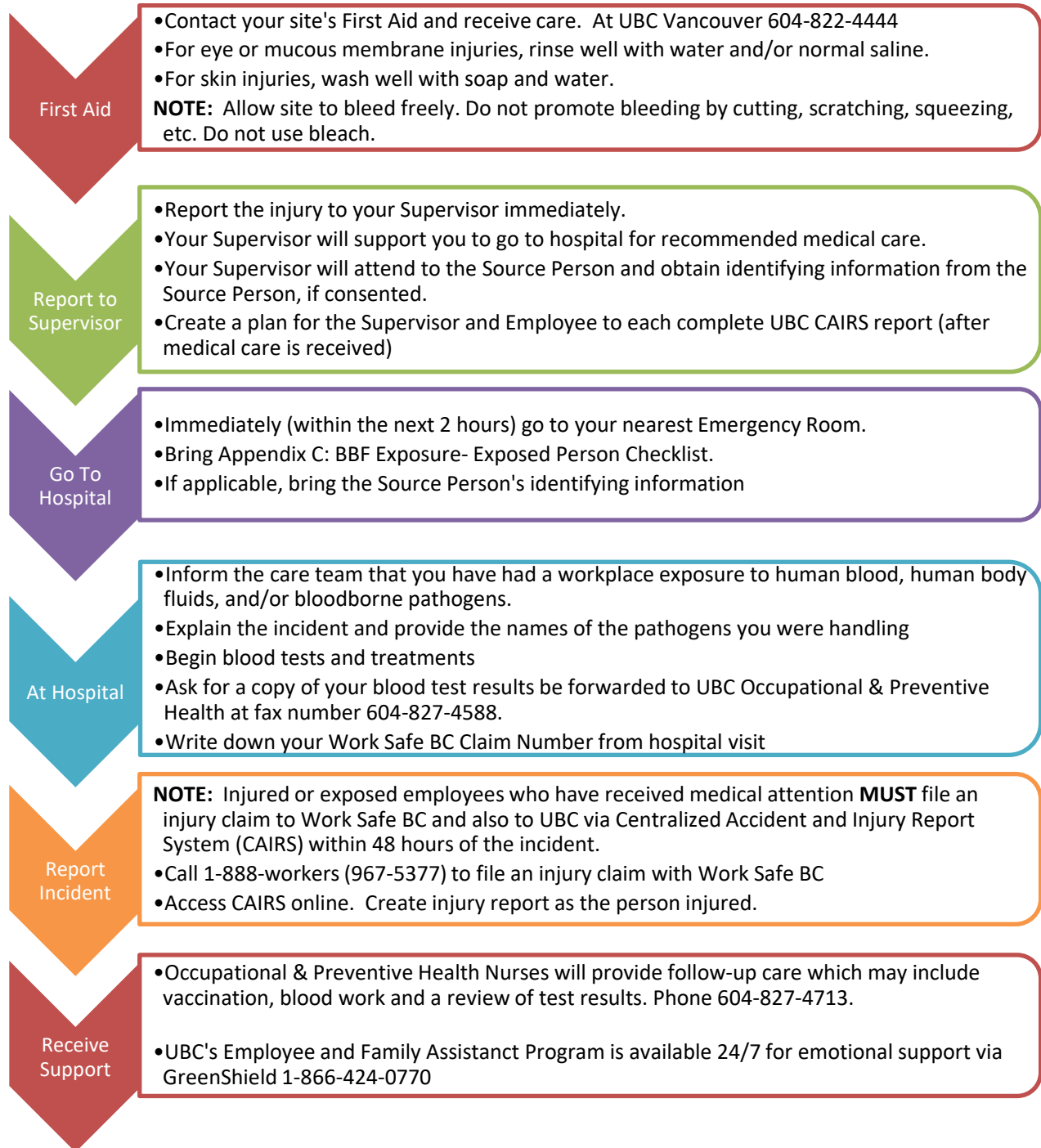
- **Contact First Aid and Cleanse the site of injury**
 - Mucous membrane or eyes: Rinse well with water and/or normal saline.
 - Skin: Allow injury/wound site to bleed freely, wash well with soap and water, and then cover lightly.
NOTE: Do not promote bleeding of percutaneous injuries by cutting, scratching, squeezing, or puncturing the skin. This may damage the tissues and increase uptake of any pathogen(s). Do not apply bleach to the injury/wound or soak it in bleach.
- **Report the exposure to your supervisor as soon as possible.**
 - Supervisor will provide you with the Source Person's name and date of birth, if applicable.
 - **Source Person Name and DOB:** _____
 - Supervisor to arrange relief from your workplace duties for medical attention.
 - Both the supervisor and exposed employee to submit an online CAIRS report within 48 hours of receiving medical attention.
- **Immediately (within the next 2 hours) go to your nearest Urgent Care or Emergency Room.**
 - Inform the care team that you have had a workplace exposure to blood and/or body fluids and disclose a list of the species/pathogens you are working with.
 - Explain the exposure incident in detail.
 - Provide the care team with Source Person's name and date of birth, if applicable, and if Source Person has consented.
 - Begin blood tests and prescribed treatment if necessary.
 - Ask for a copy of your blood test results to be forwarded to:

**UBC Occupational and Preventive Health
Dr Damon Ramsey 65455C
310-5950 University Blvd Vancouver, BC V6T 1Z3
Fax: 604-827-4588 Phone: 604-827-4713**

- **After receiving medical care - Report your injury to WorkSafeBC and to UBC CAIRS**
 - Call 1-888-workers (967-5377) or create an online WorkSafeBC account to report.
 - Within 48 hours, submit an online CAIRS report.
- **Consult with UBC Occupational and Preventive Health Nurses**
 - Receive follow-up care, which may include vaccination, blood work and a review of test results. Phone 604-827-4713 or email oph.info@ubc.ca.
- **The UBC [Employee Family Assistance Program](#) is available to you for counselling support.**



Appendix D: BBF Exposure- Exposed Person Flow Chart





Appendix E: BBF Exposure – Supervisor Checklist

- Ensure the Exposed Person has received first aid and has gone to Urgent Care/Emergency Department within 2 hours of the incident.
- Complete an incident report within 48 hours via the Centralized Accident Incident Reporting System (CAIRS).
- If the incident DOES involve a Source Person, you must discuss the following points with the Source Person:
 - A possible exposure incident has occurred. In the interest of the health and safety of both the Exposed Person and the Source Person, the Source Person is encouraged to go to the nearest Urgent Care/Emergency Room to be tested for communicable diseases including HIV, Hepatitis B and Hepatitis C.
 - The results of these tests will help guide the decision-making regarding the administration of post-exposure prophylaxis for the Exposed Person.
 - The Source Person's test results **will not** be revealed to the Exposed Person. The Exposed Person will only be told whether to continue taking prophylaxis.
- If the Source Person agrees to go to Urgent Care/Emergency Room, obtain two pieces of identifying information from the Source Person (name and date of birth) and write it on the **Exposed Person's Checklist** (Appendix C).
- If the Source Person refuses to go to the nearest Urgent Care/Emergency Room, provide them with the **Source Person Information Sheet** (Appendix F) in case they change their mind.
- Send the Exposed Person to Urgent Care/Emergency Room immediately and inform them that the Source Person has not consented to be tested.



Appendix F: Source Person Information Sheet

An incident has occurred where a UBC staff/faculty member, in the course of his/her job duties, may have been exposed to your blood and/or body fluid. Universal precautions are always followed in such cases, whereby all human blood and certain other human body fluids are treated as though they were known to be positive for HIV, Hepatitis B, Hepatitis C, and other bloodborne pathogens. The exposed person must attend the nearest Urgent Care/Emergency Room as soon as possible so that the risk level can be assessed by a physician, lab testing can be initiated, and prophylaxis medication can be prescribed where necessary.

To best assess the level of risk, it is strongly encouraged that you, the “Source Person”, be tested for bloodborne communicable diseases. This will help guide the Exposed Person’s course of treatment and care.

Please attend the nearest Urgent Care/Emergency Room with the following identifying information of the exposed person so that your lab test results can be linked with one another. If you agree, the exposed person will be given your name and date of birth so that the care providers can access your test results.

Exposed Person Name: _____ **Date of Birth:** _____

The Urgent Care/Emergency Room physician will explain to you that your test results will not be shared with the exposed person to protect your privacy and confidentiality. Your test results will be accessed by UBC’s Occupational & Preventive Health Unit to determine the most suitable continuation of treatment (including HIV prophylaxis). Please also provide Urgent Care/Emergency Room with the name of your family physician so that you can find out your test results.

Your cooperation is greatly appreciated, though you do retain the right to refuse testing.