Date Issued: September 2011	**Page No.:** 1 of 12	**Document No.:** SOP-Biosafety-08
Revision: 2.0	**Subject:** **Human Tissue, Blood or Other Body Fluid**	

1. **Purpose:**

To outline the health risks associated with the use of human tissue, blood, or other bodily fluids in research laboratories, the methods to prevent infection and the response to incidents with these materials that can potentially transmit infectious agents or primary cells derived from blood tissue.

appropriate treatment following an incident. If you know the identity of the person who was

medical personnel to request that they be tested for bloodborne pathogens. This testing could be arranged through Walsh-OHS.

Those in research laboratories work with unfixed human material from different sources, and often do not know the identity of the donor. The risk that the material contains bloodborne pathogens varies greatly. Some laboratories use samples that have been screened and found negative for HIV, Hepatitis B and Hepatitis C, making the risk that these agents are present extremely low. However it is important to know how long the time was between the negative screen and obtaining the sample, in order to determine the likelihood that the source might have changed status to infected. Other research laboratories work with fresh or frozen (unfixed) human material that has been donated by apparently normal, healthy donors. In this case the frequency of contamination of the material by bloodborne pathogens would be the same as for that particular type of biological material in the general population. **If you do not know that the sample is negative for HIV, HBV and HCV and do not know the identity of the donor, but do have a sample to which you have been exposed, then take the sample with you when you seek medical attention to determine if it can be tested for viral content.**

Some laboratories work with samples from donors known to be positive for a particular virus, the highest risk samples, or are from high risk donors (e.g. intravenous drug users, high risk sexual behaviour, recipient of blood products before 1990, or recipient of blood-derived coagulation products before 1985).

5.1 Types of Body Fluids and Risks of Transmitting Bloodborne Pathogens:

Body fluids capable of transmitting HBV, HCV, and HIV from an infected individual:

a) **Blood or any body fluid/tissue contaminated with blood**, as these are the only fluids that have been implicated in occupational infection.
b) **Semen and vaginal fluids**, as these fluids have been implicated in sexual transmission.
c) **Cerebral spinal fluid, synovial fluid, pleural fluid, peritoneal fluid, pericardial fluid and amniotic fluid.** The risk of transmission of HIV from these fluids has not yet been determined.
d) **Saliva**:
    a. if HBV infected and associated with a bite that breaks the skin (with or without the presence of blood in the saliva) *or*
    b. if HIV or HCV infected and associated with a bite (with the presence of blood in the saliva)

Note: The risk of transmission from screened, donated blood, and manufactured blood products is negligible in Canada. Feces, nasal secretions, sputum, tears, urine, and vomitus are not implicated in the transmission of HBV, HCV, and HIV unless visibly contaminated with blood. However, feces can be a source of Hepatitis A from an individual infected with this virus.

5.2 Bloodborne disease cannot be contracted by casual contact with infected persons.

Types of injuries/exposures that may result in transmission of a Bloodborne Pathogen are:

a) **Percutaneous Injury:** needle-stick or cut/puncture with a sharp object.
b) **Contact with Mucous Membranes:** splash to eyes, nose or mouth.
c) Contact with Non-intact Skin: prolonged or extensive contact of exposed skin which is chapped, abraded, or afflicted with dermatitis, with blood or other infections body fluid. Includes a bite that breaks the skin.

Needle-stick contaminated with virus	Risk of Infection
Hepatitis B Virus	6-30%
Hepatitis C Virus	3-10% (approx.)
HIV	0.3-0.4%

In Canada, it is estimated that between 210,000 and 275,000 people are currently infected with Hepatitis C Virus, of whom only 30 per cent know that they have the virus.

are only moderately susceptible to 70% ethanol. A general purpose virucidal disinfectant cleaner such as PerCept/Virox may be used on stainless stee

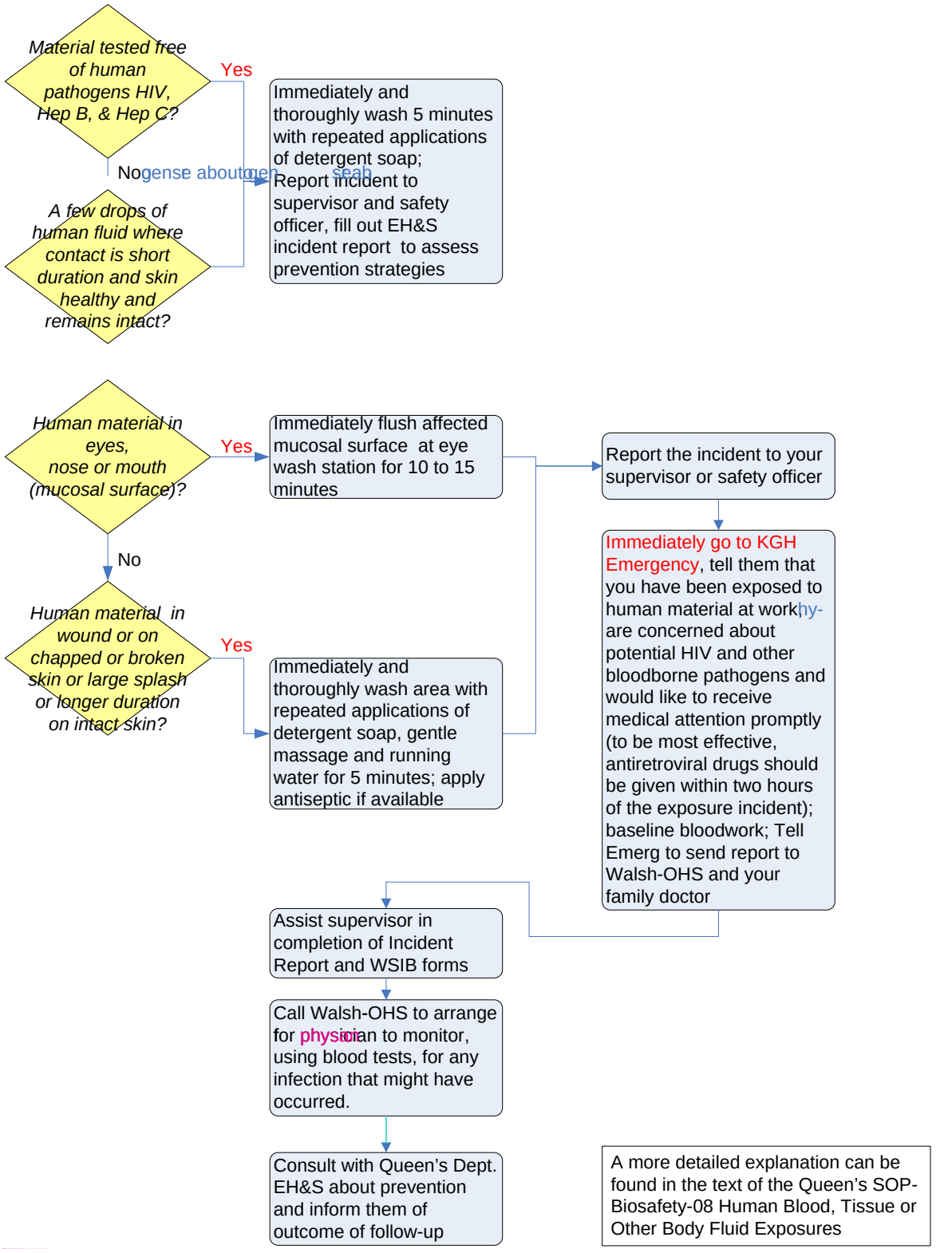
c) **If wounded and your tetanus booster was not within the last 10 years then call Walsh-OHS to arrange a booster and other follow-up or consult with your family physician.** Wounds that are large and/or have environmental contamination should be carefully cleaned and may require a booster the same day if more than 10 years since your last booster.

d) **Consider the infectious potential of the source material and the nature of the contact.**

a. If you have had contact with material that is **from a source screened negative for HIV, HBV and HCV** then you may delay seeking medical attention, if your tetanus booster is up to date. If contact was **only a few drops of unscreened fluid on intact healthy skin for a moment**, then follow-up may also be delayed. However, call Walsh-OHS as soon as feasible, explain the situation and determine when you should be seen for assessment, baseline blood work and counseling. You should normally be seen within 72 hours of the incident.

b. If the material is **from an unscreened source (i.e. has not been certified negative for HIV, HBV and HCV) and the contact is mucosal, associated with a wound (e.g. contami**

First Aid and Medical Response for Human Tissue, Blood or Other Body Fluid Exposures



Map to KGH Emergency