

(Source testing cont'd)

How results are provided to the exposed person

- If source is tested at the hospital, the physician or designate from the hospital will arrange for follow up by an infectious disease physician to inform the exposed person of the results
- If source is tested at their family physician's office, the physician or designate at the office is responsible for informing the exposed person and/or family physician of the results
- Public Health Ontario Lab in Toronto does the testing, but only provides the results to the ordering physician/hospital, not to the local Public Health Department (unless it is positive)

Source refuses & significant exposure: Emergency Service Workers – option to submit application under the Mandatory Blood Testing Act via the Ministry of Community Safety and Correctional Services: <http://www.mcscs.jus.gov.on.ca> (within 7 days)

7. POST EXPOSURE BLOODWORK TESTING OF EXPOSED PERSON (can be arranged by primary health care provider)

	Baseline (pre-existing infection; Hep B immunity)	6 weeks	3 months	4 months	6 months
Hepatitis B*	HBsAg (infection) & Anti-HBs (titre) if unvaccinated or titre unknown	Titres 1-6 months after last dose of vaccine series (if HBIg was also given, wait 6 months to allow HBIg antibodies to wane) HBsAg and Anti-HBc at 3 and 6 months only if not immune			
Hepatitis C	Anti-HCV, ALT	HCV RNA (PCR) (if high risk)	Anti-HCV ALT 95-99% sensitivity		Anti-HCV ALT 95-99% sensitivity
HIV	HIV Ag/Ab combo screen If PEP: ALT, AST, CBC, platelets, BUN, creatinine, bHCG (females)	HIV Ag/Ab earliest Ab detection 21 days		HIV Ag/Ab ** >99.5% sensitivity	

*If exposed person has had a positive titre ever (and is not immunocompromised), they are considered protected against hepatitis B for life so no testing for hepatitis B is required. Titre levels decrease in most people over time, but a positive result at any time in the past indicates lifelong protection due to immune memory.

** 4 months adequate if 4th generation combination HIV Ag/Ab test is used (Public Health Ontario Lab uses), 12 months if source co-infected with HIV and hepatitis C

8. PEP REGIMEN (Post Exposure Prophylaxis)

a) Hepatitis B Immunization - Refer to Canadian Immunization Guide for details

Immunization and Titre results (blood test to check immunity)	Risk	Action
Immunized, titre positive anytime in the past	No risk	No action
Immunized, no titre ever done*	May be at risk	Titre ASAP (<48 hours for results), if OK no action, if non-immune: High risk exposure – HBIg and vaccine, blood test for titre in 6 months If titre unknown >48 hrs-1 vaccine boost, follow above once titre known Low risk exposure – 1 dose vaccine, blood test for titre in 1 month
Unimmunized	At risk	High risk exposure - HBIg and vaccine series Low risk exposure – hepatitis B vaccine series Blood test for titre 1 month after vaccine series completed
Non-responder (negative titre when tested 1-6 months after vaccine series completed) **	At risk	High risk exposure: had 1 complete series - HBIg and 2 nd vaccine series (blood test 1 month after vaccine series completed); had 1 complete series - HBIg x 2 doses one month apart Low risk exposure – 2 nd vaccine series (if already completed, no action)

* If vaccine series was years ago and titre never done, a titre done now may be negative because antibodies may have declined (as they do in most people) but could still be protected due to immune memory. To determine if protected, give 1 vaccine dose and check titre 1 month later (6 months if HBIg also given), if positive considered immune for life (as long as not immunocompromised)

**Defined as a non-responder if titre done within 1-6 months after completion of vaccine series.

**50-70% of non-responders will respond to a second vaccine series

HBIg: immunization that provides immediate temporary protection, used in addition to hepatitis B vaccine, only in high risk exposures, physicians can order it from hospital blood banks

Hepatitis B vaccine: provides protection even after exposure, follow up vaccine series and titre done with family physician

School hepatitis B vaccine program, Ontario: grade 7, began 1994 - 3 dose series, then in 2000 - 2 dose series, equally effective, 99% at 11-15 yrs

b) Hepatitis C

- No medication or immunization indicated
- If infection occurs some people clear the virus on their own ≤ 6 months, studies suggest early treatment is beneficial

c) HIV - Updated CDC/US Public Health Service Guidelines, Management of Occupational Exposures to HIV, August 2013

- Only a 3 drug PEP regimen recommended for ALL exposures if:
 - meets criteria for exposure **and** source is HIV positive or there is a reasonable suspicion for HIV infection (see sections 3 and 4 to determine if exposure is significant)
 - PEP **not** justified for exposures that pose a negligible risk for transmission (e.g., discarded needle, bites)
- Current PEP regimen (see below) better tolerated than previous regimens
- Expert opinion recommended if exposed person pregnant/breastfeeding, source HIV+ with anti-retroviral resistance or PEP is delayed >72 hours (efficacy unknown but can consider up to 1 week if extremely high risk)

<p>Preferred HIV 3-drug PEP Regimen: Waterloo Region Hospitals - 5 day starter kits (2015)</p> <p>Isentress™ (Raltegravir) 400 mg PO twice daily x 28 days Plus Truvada™ 1 PO daily x 28 days (Tenofovir DF [TDF] 300mg + emtricitabine [FTC] 200mg)</p>

Follow up is done by physician with a special interest in HIV to monitor drug tolerance, reassess need for PEP within 3-5 days