

## Exposure to Blood and/or Body Fluids

Individuals may be exposed to blood and body fluids in multiple ways. Exposures can occur in both occupational and non-occupational exposure. With any exposure type, individuals should be evaluated for possible infections, including hepatitis B (HBV), hepatitis C (HCV), and human immunodeficiency virus (HIV).

**When an exposure occurs, it is important to immediately seek medical evaluation from a qualified health care professional** because, in some cases, postexposure treatment may be recommended and should be started as soon as possible.

### Occupational Exposures

Occupational exposures can occur through

- **Person to person** contact including
  - **Needlesticks**
  - **Cuts from other sharp instruments** contaminated with an infected patient's blood (including blood-contaminated saliva)
  - **A patient's blood entering the eye, nose, mouth or skin of another individual**

### Non-Occupational Exposures

Non-occupational exposure can occur through

- **Person to person** contact including
  - sexual exposure or a condom breaking during sex
- **Environment to person** contact including
  - **sharing needles, syringes, or other equipment to inject drugs** (for example, cookers);
  - **needlestick injuries**

### Risk After Exposure

Following a specific exposure, the risk of infection may vary with factors such as these:

- **The pathogen involved**
- **The type of exposure**
- **The amount of blood involved** in the exposure
- **The amount of virus in the patient's blood** at the time of exposure

Splashes with body fluids or fluid splashes to intact skin or mucous membranes are low risk for transmitted bloodborne pathogens. Needlestick injuries pose an increased risk of bloodborne pathogen transmission.

### Steps Following Exposure

**If you experience an exposure to blood or body fluids**, such as a needlestick, cut yourself with a sharp instrument, or were exposed to blood or another body fluid of someone else, **immediately follow these steps**:

1. **Wash the site of exposure.**
  - For example, if you had a needlestick, wash the area with soap and water.
  - If you get splashed with a body fluid, flush splashes to the nose, mouth, or skin with water.
2. **If you are exposed at work, report the incident** to your supervisor or the person responsible for managing exposures.
3. **Immediately seek medical evaluation** from a qualified health care professional.

## Post-Exposure Prophylaxis (PEP)

After an exposure, medical evaluation is necessary to conduct an assessment, provide treatment and offer follow-up recommendations. Individuals who have been exposed to blood or body fluids will have baseline screening at their initial evaluation, determine if the source of the exposure is known and receive recommendations for any prophylaxis that might be available. Prophylaxis varies for HIV, hepatitis C and hepatitis B.

### HIV

PEP is available to prevent HIV after a possible exposure. HIV PEP must be started within 72 hours of possible exposure to HIV. The sooner you start PEP, the better. If you are prescribed PEP, you'll need to take it daily for 29 days. HIV PEP is associated with side effects, severe toxicity, and drug interactions, thus the decision to take HIV PEP should be individualized following a shared decision-making process based on a risk assessment and the provider's recommendations. Follow-up testing may occur six weeks and four months after an exposure.

### Hepatitis B

Hepatitis B PEP should be initiated as soon as possible, preferably within 24 hours but PEP for hepatitis B is considered effective if given within 7 days after an exposure. Hepatitis B immune globulin and hepatitis B vaccination are available for individuals at risk for hepatitis B after an exposure. A health care provider will recommend one or both of these PEP options based on the vaccination status of the individual and the source. Individuals vaccinated may be tested for immunity 1 to 2 months after their last dose of vaccine. Follow up testing to determine infection status may be done 6 months after exposure.

### Hepatitis C

Unfortunately, there is no PEP available for hepatitis C. Individuals who have an exposure to hepatitis C, need baseline testing and then testing for hepatitis C RNA 3 to 6 weeks after an exposure and a final test for hepatitis antibodies 4 to 6 months after an exposure.

## Prevention

Individuals should follow standard precautions at all times and assume that blood and other body fluids are potentially infectious. Here are ways to prevent blood and body fluid exposures:

- **Use gloves, goggles, and other barriers** when anticipating contact with blood or body fluids.
- **Wash hands** and other skin surfaces immediately after contact with blood or body fluids.
- **Be careful when handling and disposing** of sharp instruments during and after use.
- **Use safety devices to prevent needle-stick injuries.**
- **Dispose of used syringes or other sharp instruments** in a **sharps container.**
- **Use barriers** such as **condoms and dental dams** every time you have sex.
- **Safer drug injection techniques** such as not sharing injection equipment.

### Resources

1. Kerr, C. (2020). Management of potential exposure to hepatitis B virus. New York State Department of Health AIDS Institute. [https://www.hivguidelines.org/pep-for-hiv-prevention/pep/#tab\\_12](https://www.hivguidelines.org/pep-for-hiv-prevention/pep/#tab_12).
2. Kuhar, D., Henderson, D., Struble, Kimberly A., et al. (2018). Updated U.S. Public Health Service guidelines for the management of occupational exposures to HIV and recommendations for postexposure prophylaxis. Retrieved from <https://stacks.cdc.gov/view/cdc/20711>.

3. Moorman A, de Perio, M., Goldschmidt, R., et al. (2020) Testing and clinical management of health care personnel potentially exposed to hepatitis c virus — CDC guidance, United States, 2020. Retrieved at <https://www.cdc.gov/mmwr/volumes/69/rr/rr6906a1.htm>.
4. Schillie S., Vellozzi C., Reingold A., et al. (2018) Prevention of hepatitis B virus infection in the United States: Recommendations of the advisory committee on immunization practices. Retrieved from <https://www.cdc.gov/mmwr/volumes/67/rr/rr6701a1.htm>.
5. University of California- San Francisco. National Clinician Consultation Center. (2020). Hepatitis exposure management. Retrieved from <https://nccc.ucsf.edu/clinical-resources/pep-resources/hepatitis-exposure-management/>.
6. University of California- San Francisco. National Clinician Consultation Center. (2020). PEP Quick Guide for Occupational Exposures. Retrieved from <https://nccc.ucsf.edu/clinical-resources/pep-resources/-pep-quick-guide-for-occupational-exposures/>.
7. U.S. Centers for Disease Control and Prevention. (2001). Updated U.S. Public Health Service guidelines for the management of occupational exposures to HBV, HCV, and HIV and recommendations for postexposure prophylaxis. Retrieved from <https://www.cdc.gov/mmwr/preiew/mmwrhtml/rr5011a1.htm#box2>.