

Messiah College
**Exposure Control Plan
Policy and Procedure**

Policy: It is the policy of Messiah College to establish a written program that is designed to comply with OSHA 1910.1030 concerning employees' occupational exposure to Bloodborne Pathogens.

Objectives: *Hepatitis B Vaccination*
Post Exposure Evaluation
Communication of Hazards
Recordkeeping

Equipment: *Attachment A: Needle Sticks Question and Answers*
Attachment B: Hepatitis B Vaccine Declination Letter
Attachment C: Employee Handout Concerning Exposures to Blood

Procedure: The purpose of the Exposure Control Plan is to identify tasks and work areas that are likely to present exposure to blood or other potentially infectious products, provide training for staff members in order to reduce risk for exposure and to provide for post-exposure counseling evaluation and treatment. This plan, as part of the Risk Management/Safety Program, will be reviewed annually. This plan is developed in accordance with the OSHA Bloodborne Pathogens Standard, 29 CFR 1910.1030.

Definitions: **Bloodborne Pathogen:** A pathogenic microorganism that is present in human blood and can cause disease to humans. These pathogens include, but are not limited to, hepatitis B and HIV.
Contaminated: The presence or reasonably anticipated presence of blood or other potentially infectious material on an item or surface.
Exposure Incident: A specific eye, mouth, other mucus membrane, non-intact skin, or parenteral contact with blood, body fluid, or other potentially infectious material.
HBV: Hepatitis B
HIV: Human immunodeficiency virus.
Occupational Exposure: Skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious material that may result from the performance of a employees duties.
Other Potentially Infectious Materials: Human Body Fluids including semen, secretions, cerebrospinal fluids, synovial fluid, pleural fluid, amniotic fluid, pericardial fluid, peritoneal fluid, saliva, any body fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids.
Universal Precautions: An approach to infection control. According to the concept of Universal Precautions, all human blood and certain human body fluids are to be treated as if know to be infectious for HIV, HBV, and other bloodborne pathogens.

Job Categories at Risk for Exposure

OSHA requires employers to perform an exposure determination concerning which staff members may incur occupational exposure to blood or other potentially infectious materials. The exposure determination is made without regard to the use of personal protective equipment (i.e. staff members are considered to be exposed even if they wear personal protective equipment). This exposure determination is required to list all job classifications in which all staff members may be expected to incur such occupational exposure, regardless of frequency. At Messiah College, the following job classifications are in this category (hereafter referred to as Category No. 1):

Category No. 1:

Staff and Faculty in the Sciences and Health Services, Registered Nurses, Licensed Practical Nurses

In addition OSHA requires employers to identify job classifications in which some staff members may be expected to incur occupational exposure. This includes personnel who may respond to the scene of an accident such as Department of Safety, Maintenance, Grounds and Athletics employees (hereafter Category No. 2).

Category No. 2:

Laundry staff may come in contact with blood and body fluids while processing soiled linens and sports laundry.

Campus Events, Dining Service Staff, Science Academic employees, Engle Center employees, Waste Coordinator, Athletic Coaches, and Athletic trainers who may come in contact with blood and body fluids while cleaning, blood spill clean up and transporting medical hazardous waste.

Category No. 3 includes personnel not expected to incur occupational exposure.

Category No. 3:

Administration, Accounting, Clerical and Office Personnel, and Faculty not in the Science area.

Standard Precautions

Standard Precautions are designed to reduce the risk of transmission of microorganisms from both recognized and unrecognized sources in this facility. Standard Precautions incorporate the major features of Universal Precautions (designed to reduce the risk of transmission of blood-borne pathogens) and Body Substance Isolation (designed to reduce the risk of transmission of pathogens from moist body substances). Standard Precautions apply to (1) blood; (2) all body fluids, secretions, and excretions except sweat, regardless of whether or not they contain visible blood; (3) non-intact skin; and (4) mucus membranes.

Engineering and Work Practice Controls

The single most important procedure for preventing acquired infection is good hand hygiene. Hand hygiene is indicated before and after any personal contact, before

performing invasive procedures, before giving care to immunocompromised individuals, before and after touching wounds, before gloves are put on and after gloves are removed, after contact with mucous membranes and after handling potentially contaminated items such as urine or sputum collection devices or soiled laundry.

Personal Protective Equipment (PPE)

PPE will be provided by Messiah College at no cost to the employee. Gloves will be worn when the employee has the potential for the hands to have direct contact with blood or other potentially infectious material, mucous membranes, non-intact skin and when handling items or surfaces soiled with blood or other potentially infectious material. Gloves are to be worn when handling linens soiled with urine, feces or sputum. Gloves are to be worn when performing venipunctures or injections or changing dressings. Disposable gloves will be replaced as soon as possible when visibly soiled, torn or punctured. They will not be washed or disinfected for reuse. Utility gloves (used by Laundry and Campus Events) may be disinfected for reuse so long as the integrity of the glove is maintained. Employees are responsible for cleaning gloves with disinfectant provided and storing gloves in their respective work area.

Masks/eye protection/face shields will be worn whenever splashes, sprays, spatter or aerosols of blood or other potentially infectious material may be generated and there is potential for eye, nose or mouth contamination. All procedures involving blood or infectious materials will be performed according to individual department procedures in order to minimize splashes and aerosolization. Additional supplies are available from the department supervisor/manager. Goggles are supplied where required and determined necessary by the supervisor/manager and in Campus Events and Laundry areas. Goggles are for use when pouring potentially hazardous liquids or in any other situation where splashes of body fluids could occur. Face shields and/or goggles are supplied in the Maintenance Department for use when welding or pouring hazardous materials.

Employee are expected to clean protective devices as they become soiled with infective material or before the staff member leaves the work area at the end of the shift.

The use of personal protective equipment is monitored by supervisors. Staff members who do not comply will receive disciplinary action in accordance with Human Resource Policies.

Sharps Injury Prevention Program

The Sharps Injury Prevention Program is meant to provide protection to everyone in the facility, from the sharps user to anyone who may come in contact with sharps after use.

Used needles and other sharps will not be sheared, bent, broken, recapped or resheathed by hand. Used medical sharps will be placed in the puncture-proof plastic containers provided by the facility. 3/4 filled containers are disposed of in the Biohazard Waste Stream. If needed, sharps containers can be picked up at the Engle Center. The Engle Center will accept all sharps containers and offers a personal sized container in exchange.

Broken glass will not be picked up directly with the hands. It will be cleaned up using mechanical means such as a brush and dustpan.

Cosmetics, Food Storage and Consumption, Smoking and Personal Hygiene

Eating, drinking, applying cosmetics and handling contact lenses are prohibited in work areas where there is a potential for occupational exposure. (Smoking is prohibited at Messiah College). Staff members are reminded to wash their hands carefully before handling contact lenses or touching the face, lips or eyes in order to minimize risk for infection.

Food may not be stored in areas where contamination is likely. Medications and Biologicals must be stored separately from refrigerated food items. Refrigerators are available in employee lounges for food related items. Other refrigerators are reserved for medications and laboratory samples.

Specimens

Specimens of blood or other potentially infectious materials will be placed in a container that prevents leakage during the collection, handling, processing, storage and transport of the specimen. The container will be labeled or color-coded with the requirements of the OSHA Standard.

Specimens that could puncture the primary container should be placed in a plastic container prior to placing in a laboratory bag.

Labels and Signs

Warning labels will be affixed to containers of medical waste. Red bags with biohazard symbol may be substituted for labels. Labels will display the universal biohazardous sign or the word 'Biohazard.' Labels will be securely affixed to containers.

Campus Events

Employees are expected to use the gloves provided when cleaning areas that may be contaminated with blood or infectious material. Campus Events and Dining Services workers will have mops laundered weekly and cleaning cloths laundered after each use. Blood spills will be cleaned following the Messiah College Blood/Body Fluid Clean Up Procedure, which is located on the Risk Management Channel. Contaminated items will be placed in red plastic bags for disposal. All pails, cans and similar containers intended for reuse which are likely to become contaminated by blood or body fluids will be inspected and decontaminated on a regular basis and as soon as visible contamination occurs.

Laundry

Soiled linen will be handled as little as possible. All linen is considered contaminated and standard precautions should be used at all times. Staff members will wear

protective aprons and reusable gloves while working in the soiled linen areas of the Laundry department.

BioHazardous Waste Policy

Medical infectious waste is to be handled as outlined in the Messiah College Biohazard Waste Policy that is located on the Safety Committee Channel on the Messiah College Web Page. Contaminated sharps will be immediately placed in the designated puncture proof containers, which are readily accessible. Containers must not be overfilled. Medical Waste is to be transported to the Central Accumulation area in the Lenher Building by the Waste Coordinator.

Hepatitis B Vaccine

All employees in Job Categories 1 & 2 have been identified as at risk for exposure to blood or other potentially infectious materials and will be offered Hepatitis B Vaccine at no cost to the employee. Human Resources will offer the vaccine within 10 working days of their initial assignment to work involving the potential for occupational exposure unless the employee has previously had the vaccine or chooses to have antibody testing to determine immunity.

Employees who decline the Hepatitis B Vaccine will sign a waiver (Attachment B) as described in Appendix A of the OSHA standard (page 597). Employees who initially decline the vaccine but who later wish to have it may then have the vaccine at no cost.

The Human Resource Office has responsibility for assuring that the vaccine is offered, providing educational information, obtaining signed consent, administering the vaccine, ensuring appropriate documentation and providing post-exposure follow-up.

Post-Exposure Evaluation and Follow Up

Prehospital Care:

Any staff member who has a needlestick exposure or blood or body fluid contact is to report to the Engle Center right away. If the Engle Center is closed, the employee is to report to Concentra or a hospital for treatment and/or decontamination. The hospital should be provided with details of the exposure incident and a copy of OSHA 1910.30. If the exposure is mucosal or the wound is large enough to irrigate, irrigate with copious amounts of saline or other clean fluid. The exposure is to be reported to Human Resources at first convenience by the employee, the Engle Center, or the employee's supervisor.

Emergency Department Care (*What to expect at the hospital*):

- Irrigation and cleaning of wound.
- Tetanus and/or hepatitis B prophylaxis if necessary; need is based on past medical history. Healthcare providers and employees listed in categories 1 and 2 should have been immunized against hepatitis B. Hepatitis A prophylaxis may (rarely) need to be considered depending on the source-patient situation.

- The need for HIV or chemoprophylaxis (antiretrovirals) is based on an assessment of the risk using the 3-step process developed by the Centers for Disease Control and Prevention (CDC).
 - Step 1: Determine exposure code.
 - Is the source material blood, bodily fluid, other potentially infectious material, or an instrument contaminated with one of these substances?
 - If not, there is no risk of HIV transmission.
 - If yes, what type of exposure occurred?
 - If the exposure was to intact skin only, there is no risk of HIV transmission.
 - If the exposure was to mucous membrane or integrity-compromised skin, was the volume of fluid small (ie, few drops, short duration) or large (ie, several drops or major splash, long duration)?
 - If small, the category is exposure code 1.
 - If large, the category is exposure code 2.
 - If the exposure was percutaneous, was it a solid needle or a superficial scratch (ie, less severe)?
 - If yes, the category is exposure code 2.
 - Was it from a large-bore hollow needle, a device with visible blood, or a needle used in a source patient's artery or vein (ie, more severe)?
 - If yes, the category is exposure code 3.
 - Step 2: Determine HIV status code.
 - What is the HIV status of the exposure source?
 - If HIV negative, no postexposure prophylaxis is needed.
 - If HIV positive, was the exposure low titer or high titer?
 - Low-titer exposures are asymptomatic patients with high CD4 counts. These are HIV status code 1.
 - High-titer exposures are patients with primary HIV infection, high or increasing viral load or low CD4 counts, or advanced acquired immunodeficiency syndrome (AIDS). These are HIV status code 2.
 - If HIV status is unknown or the source is unknown, the HIV status code is unknown.
 - Step 3: Match exposure code with HIV status code to determine if any postexposure prophylaxis is indicated.
 - Postexposure prophylaxis recommendation
 - Exposure code 1 and HIV status code 1: Postexposure prophylaxis may not be warranted. Exposure type does not pose a known risk. The exposed health care worker and the treating clinician should decide whether the risk for drug toxicity outweighs the benefit of postexposure prophylaxis.
 - Exposure code 1 and HIV status code 2: Consider basic regimen. Exposure type poses a negligible risk for HIV transmission. A high HIV titer in the source may justify consideration of postexposure prophylaxis. The exposed health care worker and the treating clinician should decide whether the risk for drug toxicity outweighs the benefit of postexposure prophylaxis.
 - Exposure code 2 and HIV status code 1: Recommend the basic regimen. Most HIV exposures are in this category. No increased

risk for HIV transmission has been observed, but use of postexposure prophylaxis is appropriate.

- Exposure code 2 and HIV status code 2: Recommend expanded regimen. Exposure type represents an increased HIV transmission risk.
- Exposure code 3 and HIV status code 1 or 2: Recommend expanded regimen. Exposure type represents an increased HIV transmission risk.
- HIV status code unknown: If the source or, in the case of an unknown source, the setting where the exposure occurred suggests possible risk for HIV exposure and the exposure code is 2 or 3, consider postexposure prophylaxis basic regimen.
- Basic regimen: 4 weeks of zidovudine (600 mg/d in 2-3 divided doses) and lamivudine (150 mg twice daily)
- Expanded regimen: Basic regimen plus either indinavir (800 mg q8h) or nelfinavir (750 mg 3 times/d).
- Interferon ribavirin prophylaxis decreases risk by 40%. Exposed workers should be counseled on the risks of disease transmission based upon their specific exposure.

Training

Training for all staff members will be conducted prior to initial assignment to tasks where occupational exposure may occur. Training, tailored to the staff member's responsibilities, will be conducted by the department supervisor. The Environmental Health & Safety Manager will be responsible for providing annual training to all staff who have responsibilities outlined in the Biohazard Waste Disposal and Handling Policy. These training records will be maintained by the Environmental Health and Safety Manager in the Lenhert Resource Room.

Training for staff members will include the following explanation of:

1. The OSHA Standard for Blood Borne Pathogens.
2. Epidemiology and Symptomatology of Blood Borne Diseases (HBV, HCV, HIV)
3. Modes of transmission of Blood Borne Pathogens.
4. This Exposure Control Plan, i.e. points of the plan, lines of responsibility, how the plan will be implemented, etc.
5. Procedures which might cause exposure to blood or other potentially infectious materials at this facility.
6. Control methods which will be used at the facility to control exposure to blood or other potentially infectious materials.
7. Personal Protective Equipment available at this facility and who should be contacted concerning it.
8. Post Exposure Evaluation and follow-up.
9. Signs and labels used at the facility.
10. Hepatitis B Vaccine program at the facility.

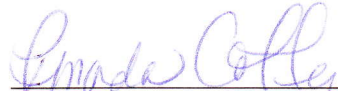
Record Keeping

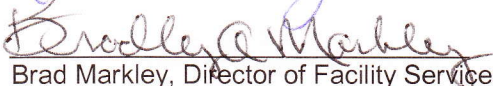
All records required by this OSHA standard will be maintained by the Human Resource Office. Medical records will be compiled and maintained by the Human Resource Office. The record will include the staff member's name, social security number, a copy of the HBV record and the staff member's acceptance to receive Hepatitis B Vaccine, the circumstances of the exposure incident, a copy of results of the physical exam and follow-up procedures and a copy of the physician's written opinion. These records are confidential and will not be disclosed except as required by law. The records will be maintained for 30 years after the staff member terminates employment as required by 29 CFR 1910.20.

Individual department training records will be maintained in the specific department and will be the responsibility of the supervisor of that department.

By signing this policy, I agree to enforce the content of the policy and make my staff aware of the content as well.

Approved Reviewed Revised

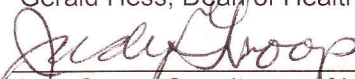

Amanda Coffey, Human Resource Director

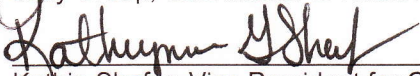

Brad Markley, Director of Facility Services


Hilary Kreider, Environmental Health & Safety Manager



Scott Zeigler, Campus Events/Laundry Manager

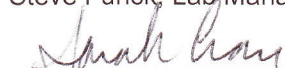

Gerald Hess, Dean of Health & Natural Sciences

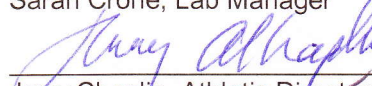

Judy Groop, Coordinator of Health Services


Kathie Shafer, Vice President for Operations


Cindy Burger, Director of Safety and Dispatch Services


Steve Funck, Lab Manager


Sarah Crone, Lab Manager


Jerry Chaplin, Athletic Director


Brad McCarty, Assistant Athletic Director


Mark Wirtz, Dining Service Director

"Note - The signed copy of this procedure is filed in the Facility Service Department. By signing this policy you have agreed to enforce the contents and adhere to standards".

Attachment A Needle Sticks Question/Answers

For individuals who have been injured with a needle that may have been used.

What should I do?

Wash the injured area with soap and water and go to the Engle Health Center, hospital or Concentra for treatment immediately. Most likely the hospital or Concentra will take blood tests, provide counseling regarding Human Immunodeficiency Virus (HIV), Hepatitis B, Hepatitis C and other diseases transmitted by exposure to blood, and answer your questions. He/she will tell you what symptoms to watch for during the next 6 months. Most people who are going to become infected do so within 6 months. If you are an employee, you should go to Concentra or hospital immediately.

Can the syringe be tested for HIV, Hepatitis B and Hepatitis C?

No. Laboratories are not able to test syringes and/or needles for HIV, Hepatitis B or the Hepatitis C Virus because there is not enough blood to test. Also, antibody tests for these viruses cannot be done after blood is dry.

What should I do with the syringe?

Contact the Engle Center for proper disposal of the needle.

What is needed for disease transmission to occur?

In order for there to be disease transmission, these things must occur:

- 1) the person who used the needle must have the disease;
- 2) the person stuck by the needle must be susceptible to the disease;
- 3) the person stuck by the needle has to get enough virus into the body to cause infection.

While HIV, Hepatitis B, and Hepatitis C can be transmitted by needlestick, this does not occur often.

Is there anything else I should do?

Public health recommendations during the six months following exposure to blood include:

- NO sharing of personal items, such as needles, toothbrushes and razors;
- NO unprotected sexual intercourse;

- NO breast-feeding; and,
- NO blood, semen, or organ donations .

Is the Hepatitis B vaccine recommended after a needlestick injury?

Your doctor will discuss the Hepatitis B vaccine with you. The Centers for Disease Control and Prevention (CDC) recommends that unvaccinated persons receive the first dose of the vaccine as soon as possible, the second dose in one month, and the third dose in six months.

Am I at risk for HIV?

Although the risk of getting HIV from a used syringe/needle is not zero, HIV is a fragile virus and does not survive well outside the human body. Studies have shown that the amount of virus found in dried blood is reduced by 90-99% within several hours, thus making it very difficult to infect a person. Discuss this issue with your doctor.

Am I at risk for Hepatitis B?

The Hepatitis B virus is much stronger than HIV. As dried blood, Hepatitis B stays alive for one week, and maybe longer. Thus, you are at greater risk of contracting Hepatitis B from a used syringe/needle than HIV. Discuss this issue with your doctor.

Am I at risk for Hepatitis C?

Approximately 2 out of 100 people develop Hepatitis C after a needlestick exposure to Hepatitis C infected blood. Discuss this issue with your doctor.

Attachment B
Hepatitis B Vaccine Declination

To be signed and Dated by employee who do not wish to have the vaccination series

"I understand that due to my occupational exposure to blood, or other potentially infectious materials I may be at risk of acquiring hepatitis B virus (HBV) infection. I have been given the opportunity to be vaccinated with Hepatitis B vaccine, at no charge to myself. However, I decline hepatitis B vaccination this time. I understand that by declining this vaccine, I continue to be at risk of acquiring hepatitis B, a serious disease. If in the future I continue to have occupational exposure to blood or other potentially infectious materials and I want to be vaccinated with hepatitis B vaccine, I can receive the vaccination series at no charge to me"

Attachment C

Educational Handout for Employees Who May Have Experienced An Exposure

INTRODUCTION — Exposure to blood or other bodily fluids can result in the transmission of many serious infections, including the human immunodeficiency virus (HIV, the virus that causes AIDS). While most people are not exposed to these fluids, a number of situations can arise where exposures may occur, such as finding a syringe with needle in a park, sharing needles in the injection of illicit drugs, helping an injured person, or becoming the victim of an assault or rape.

Many healthcare facilities are grappling with the appropriate advice to give in these sorts of situations. It is important to note that the guidelines that exist are not based on studies of exposures outside of the healthcare system. Most of the recommendations are derived from needlestick and other exposures of healthcare workers.

Although more than 200 different diseases can be transmitted from exposure to blood, the three most important are hepatitis B virus (HBV), hepatitis C virus (HCV), and HIV. Fortunately, the risk of acquiring any of these infections is low.

DEFINITION — In order to be exposed to a bloodborne pathogen, an individual must have contact with blood, a visibly bloody fluid (e.g. phlegm or urine containing blood), or other bodily fluid (e.g. semen or vaginal secretions) that may contain a virus. The blood or fluid must come into contact with some part of the exposed person's body, through which absorption could take place.

A virus can be absorbed through the blood or mucous membranes, which include the eye, mouth, or genitals. Contact with skin that is intact (without new cuts, scrapes, or rashes) does not constitute an exposure unless the area of the body covered is extensive.

Thus, exposure to a bloodborne pathogen is possible after:

- A percutaneous (through the skin) injury such as a needlestick or cut with a sharp object
- Contact of mucous membrane (including exposure through sexual intercourse especially if an ulcer is present or trauma to vaginal tissues occurs) or non-intact skin

INFECTION AFTER EXPOSURE — Of these viruses, HBV is the most infectious. A healthcare worker who sustains a needlestick with blood from a known HBV-infected patient has between a 6 and 30 percent chance of developing HBV. The percent for HCV and HIV in the same situation is 1.8 and 0.3, respectively. Other factors influence the risk of becoming infected, including the amount of blood or bodily fluid involved, the depth of penetration, and the amount of virus in the source's blood or body fluid.

The risk of acquisition from a mucous membrane exposure is more difficult to define. When healthcare workers were followed after mucous membrane exposure to HIV, no cases of HIV were identified among those who had been exposed. However, no other explanation for HIV has been found in a few cases where occupational mucous membrane exposure occurred. This has led most experts to state that the risk of acquiring HIV following a mucous membrane exposure is far less than 0.3 percent but not zero.

There is also a difference in terms of risk if the individual has a one-time exposure or has multiple exposures. Thus, the risk for the victim of a single sexual assault is different than for the sexual partner of an infected patient, who is likely to have had more than one exposure.

POST-EXPOSURE RECOMMENDATIONS — The first and most important measure to take following exposure to blood or bodily fluids is to wash the area well with soap and water. Crime victims are exceptions to this rule since washing may destroy important evidence for criminal prosecution. If a cut has occurred, forced bleeding by pressing on the cut for 30 seconds to a minute is advisable, even before washing.

Potentially protective measures to take after exposure for each of the major viruses is different (see below).

Hepatitis B — Although of the three diseases discussed here, HBV is the most infectious, it is also the only one of the three for which there is an effective vaccine. The vaccine, which is made from a piece of the virus, may be administered to individuals who are exposed to blood, even if the blood is not known to carry HBV. The vaccine should be given at the time of exposure, and repeated one month and six months later, to achieve full protection.

If the source of the exposure is known to be positive for HBV, hepatitis B immune globulin (HBIG), which contains antibodies (proteins the body makes to protect against an infection) to the virus, should be given as soon as possible after exposure, preferably within 24 hours. The first dose of hepatitis B vaccine should be given at the same time.

Hepatitis C — HCV can cause a form of hepatitis that leads to chronic liver disease. However, there are no known effective means of preventing this infection following exposure. It is advisable to have blood tests done to assess your liver following a possible exposure and then to have these tests repeated approximately six months later or sooner if symptoms of hepatitis develop. These symptoms include: loss of appetite, nausea, abdominal pain, darkening of urine, light stools, or jaundice (yellowing of the skin or whites of the eye).

Human immunodeficiency virus (HIV) — Information on the value of giving drugs to try to prevent HIV infection after exposure comes from animal studies and treatment of healthcare workers. One retrospective study suggested that treating healthcare workers

that have been exposed to HIV with zidovudine (ZDV) reduced the already low risk of acquiring the virus infection by about 81 percent.

Most healthcare workers are now treated with combination therapy, usually two drugs, ZDV and lamivudine (3TC). A third drug, usually a protease inhibitor, is included when the exposure poses an increased risk for transmission or where resistance of the virus to the other drugs is known or suspected based on drugs to combat HIV that the source patient might have been taking.

Many clinicians routinely use the expanded three-drug regimen because of the increased efficacy achieved by adding a protease inhibitor to regimens containing only reverse transcriptase inhibitors in the treatment of persons with AIDS.

In order to determine the most appropriate preventive treatment for a non-healthcare worker, the nature of the exposure and the likelihood of ongoing exposure should be taken into account. The evaluation should also include information about any medications the individual may be taking, and any current or underlying medical conditions that would influence the decision about which drugs should be used. Such conditions, for example, include pregnancy, breast feeding, or kidney or liver disease. All women of childbearing age whose pregnancy status is unknown should be tested for pregnancy.

If the source of exposure is known, an attempt can be made to test them for HIV, although many states have requirements that informed consent be obtained. The exposed individual should be tested for HIV at the time of exposure (baseline) and at six weeks, three months, and six months postexposure.

Postexposure prevention treatment should be started as soon as possible after exposure, within a few hours rather than days. It should not be given if more than 72 hours have elapsed. The Centers for Disease Control and Prevention (CDC) recommends the following for exposures outside of the healthcare system: efavirenz plus (lamivudine or emtricitabine) plus (zidovudine or tenofovir) OR Kaletra (lopinavir/ritonavir) plus (lamivudine or emtricitabine) plus zidovudine.

The drugs may produce side effects, and animal studies suggest that the longer treatment is delayed, the less effective it is. The optimal length of preventive treatment is unknown, but four weeks is the generally accepted course.

Any individual who has been exposed to HIV and who receives postexposure antiretroviral treatment needs to be informed about potential side effects of these drugs, potential drug interactions, and the proper timing of doses. It is crucial to take all of the medication. A group in Canada found that only 8 of 71 people who accepted prophylaxis against HIV following a sexual assault completed the four-week course of treatment. One of the major reasons for stopping the medication is side effects. If you are taking these medications and develop any symptoms, you should contact your doctor and ask if the symptoms might be related to the drugs.

FOLLOW-UP TREATMENT — Follow-up testing for HBV and HCV should be performed about 12 weeks after possible exposure. For people receiving HBV vaccine, return appointments to complete the vaccine series are crucial. For those with possible HCV exposure, contact with your physician to answer any questions that you might have is important in addition to follow-up blood tests.

Individuals who may have been exposed to HIV should receive follow-up counseling, postexposure testing, and medical evaluation whether or not they receive postexposure treatment. HIV antibody testing should be performed for at least six months postexposure, at six weeks, 12 weeks, and six months. In addition, HIV testing should be performed on any person who has an illness that is compatible with an acute retroviral syndrome, regardless of the interval since exposure..

People exposed to a bloodborne pathogen via sexual intercourse will probably also be screened for other sexually transmitted diseases (STDs). In particular, blood tests for syphilis and cultures for gonorrhea and chlamydia most likely will be performed at baseline after exposure and two weeks later. Blood tests for syphilis will also generally be repeated at the same times as the HIV antibody testing if the first two tests are negative.

PROTECTING OTHERS AFTER EXPOSURE — Anyone exposed to a bloodborne pathogen should be educated about how to prevent secondary transmission to others (for example, family, sexual partner or breastfeeding child) during the follow-up period, especially during the first six months after exposure. This time period is when most people who are infected with HIV become antibody positive.

Precautions should include either abstaining from sexual intercourse or the use of condoms. Condoms reduce, but do not completely eliminate, the chances of transmitting HBV, HCV, or HIV infection to others. Women who have been exposed to blood or body fluids from a person known to be infected should avoid becoming pregnant during this time. In addition, individuals who have been exposed to HIV-infected fluids should not donate blood, plasma, organs, tissue, or semen during the follow-up period. Women who are breast feeding may consider stopping temporarily.