HealthStream Regulatory Script

**Standard Precautions:**
Bloodborne Pathogens and Other Potentially Infectious Materials

**VERSION:** [May 2006]

Lesson 1: Introduction
Lesson 2: Bloodborne Pathogens
Lesson 3: Protecting Yourself
Lesson 4: What to Do if You Are Exposed
Welcome to the introductory lesson on Standard Precautions and bloodborne pathogens.

As your partner, HealthStream strives to provide its customers with excellence in regulatory learning solutions. As new guidelines are continually issued by regulatory agencies, we work to update courses, as needed, in a timely manner. Since responsibility for complying with new guidelines remains with your organization, HealthStream encourages you to routinely check all relevant regulatory agencies directly for the latest updates for clinical/organizational guidelines.
Course Rationale

This course will help you protect:
- Yourself
- Your coworkers
- Your patients
- Your family

You will learn how to:
- Work safely with blood and body fluids.
- Protect against exposure to bloodborne pathogens.
## Course Goals

After completing this course, you should be able to:

- Identify important bloodborne pathogens and how they are spread.
- List important safeguards against bloodborne pathogen exposure.
- Recognize what to do if you are exposed to a bloodborne pathogen.
This introductory lesson gives the course rationale, goals, and outline.

Lesson 2 describes bloodborne pathogens. This includes three important bloodborne diseases and how they are spread.

Lesson 3 explains how to use Standard Precautions to protect against exposure to bloodborne pathogens.

Finally, lesson 4 describes what to do if you are exposed to a bloodborne pathogen.
Lesson 2: Bloodborne Pathogens
2001

Introduction & Objectives

Welcome to the lesson on bloodborne pathogens.

After completing this lesson, you should be able to:
- Define “bloodborne pathogen.”
- List three important bloodborne diseases.
- Identify the symptoms of these diseases.
- Recognize how bloodborne diseases are spread.

FLASH ANIMATION: 2001.SWF/FLA
### Bloodborne Pathogens

A *pathogen* is an organism that causes disease.

*Bloodborne pathogens* are pathogens carried in a person’s bloodstream. They also may be present in other body fluids.

- Bacteria
- Viruses
- Fungi
- Parasites

![Pathogens include:](2002.GIF)
<table>
<thead>
<tr>
<th>Bloodborne Diseases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthcare workers routinely come into contact with human blood and other body fluids.</td>
</tr>
<tr>
<td>As a result, healthcare workers are at risk for exposure to bloodborne pathogens.</td>
</tr>
<tr>
<td>This means that healthcare workers need to know:</td>
</tr>
<tr>
<td>• Important bloodborne diseases</td>
</tr>
<tr>
<td>• Symptoms of these diseases</td>
</tr>
<tr>
<td>• How these diseases are spread</td>
</tr>
</tbody>
</table>

IMAGE: 2003.GIF
## Important Bloodborne Pathogens

<table>
<thead>
<tr>
<th>Three important bloodborne pathogens are:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Hepatitis B virus (HBV)</td>
</tr>
<tr>
<td>• Hepatitis C virus (HCV)</td>
</tr>
<tr>
<td>• Human immunodeficiency virus (HIV)</td>
</tr>
</tbody>
</table>

*IMAGE: 2004.JPG*
**2005**

<table>
<thead>
<tr>
<th>HBV &amp; HCV</th>
</tr>
</thead>
<tbody>
<tr>
<td>HBV and HCV both infect the liver.</td>
</tr>
<tr>
<td>Both of these viruses can cause long-term liver damage.</td>
</tr>
<tr>
<td>Eighty-five percent (85%) of those infected with HCV become chronic carriers.</td>
</tr>
<tr>
<td>HBV and HCV infections can be life threatening.</td>
</tr>
<tr>
<td>IMAGE: 2005.JPG</td>
</tr>
<tr>
<td>HBV &amp; HCV: Vaccines</td>
</tr>
<tr>
<td>---------------------</td>
</tr>
</tbody>
</table>
| If you are at risk for exposure to blood or OPIM* [glossary] because of your job, your employer must:  
  - Offer you the hepatitis B vaccine.  
  - Pay for the vaccine.  
  The vaccine is very safe and effective.  
  If you do not want the vaccine, you will need to sign a form. This form states that your employer offered you the vaccine, and you refused. If you change your mind later, you can still receive the vaccine at any time.  
  For more information on the HBV vaccine, contact your supervisor.  
  There is no vaccine for HCV at this time.  
  *Note: You will learn more about OPIM later in the course. See the glossary for a definition. |

*Note: You will learn more about OPIM later in the course. See the glossary for a definition.*
## HBV & HCV: Symptoms of Infection

Signs and symptoms of HBV and HCV infection can include:

- Feeling tired
- Loss of appetite
- Mild fever
- Aching muscles or joints
- Diarrhea
- Nausea and vomiting
- Yellowed skin and eyes (jaundice)
- Dark urine
- Light colored stools
- Itching
HIV

<table>
<thead>
<tr>
<th>HIV</th>
<th>IMAGE: 2008.JPG</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV attacks the immune system. This causes the disease known as AIDS. Without a strong, healthy immune system, the body develops many infections and illnesses. These infections and illnesses are the direct cause of death for many AIDS patients.</td>
<td></td>
</tr>
<tr>
<td>HIV: Symptoms of Infection</td>
<td></td>
</tr>
<tr>
<td>----------------------------</td>
<td></td>
</tr>
<tr>
<td>Early HIV infection may feel like the flu.</td>
<td></td>
</tr>
<tr>
<td>Other signs and symptoms of HIV infection can include:</td>
<td></td>
</tr>
<tr>
<td>• Swollen lymph nodes</td>
<td></td>
</tr>
<tr>
<td>• Visual changes</td>
<td></td>
</tr>
<tr>
<td>• Diarrhea</td>
<td></td>
</tr>
<tr>
<td>• Night sweats</td>
<td></td>
</tr>
<tr>
<td>• Unexplained weight loss</td>
<td></td>
</tr>
<tr>
<td>• Rash</td>
<td></td>
</tr>
<tr>
<td>• Fatigue</td>
<td></td>
</tr>
<tr>
<td>• Shortness of breath</td>
<td></td>
</tr>
<tr>
<td>• Frequent pneumonias</td>
<td></td>
</tr>
</tbody>
</table>

![IMAGE: 2009.JPG](image)
Transmission of Bloodborne Diseases

Many patients infected with HBV, HCV, or HIV do not have obvious symptoms.

These patients can still spread the disease.

They may pass the disease to others without even knowing it.

![IMAGE: 2010.JPG]
### Exposure & Transmission: Modes

Bloodborne diseases can be spread in several ways.

The three most important ways are:
- Sexual contact
- Sharing drug needles
- Mother-to-baby exchange of bodily fluids

**High-Risk Activities for Contracting a Bloodborne Disease:**
- Unprotected sex
- Using dirty needles for injection drugs
Exposure & Transmission: Among Healthcare Workers

In the healthcare setting, workers can be exposed to bloodborne pathogens in additional ways.

Workers are at highest risk of HBV, HCV, or HIV infection from needle-stick or other sharps injury.

Healthcare workers also can be exposed to bloodborne pathogens if they have:
- Mucous membrane (eye, nose, mouth) contact with infectious materials
- Non-intact skin contact with infectious materials

Healthy, intact skin is the best natural defense against bloodborne pathogens. Even a simple hangnail or a rash can be an entry point for pathogens.
Exposure & Transmission Among Healthcare Workers: Risk

| When a healthcare worker is exposed to a bloodborne pathogen, the pathogen is not always transmitted. | IMAGE: 2013.JPG |
| For example, HBV is more transmissible than HCV or HIV. | |
| What does this mean? | |
| Suppose a healthcare worker is exposed to blood from a patient who has hepatitis B. This worker has up to a 30% chance of becoming infected with the virus. | |
| By contrast, a healthcare worker exposed to HIV has less than a 1% chance of getting the virus. | |
### Exposure & Transmission Among Healthcare Workers: Risk

Several other factors also affect the risk of infection following exposure.

These factors include:

- **Amount of exposure.** For example, a large blood splash into the mouth is more likely to lead to infection than a small splash.
- **Route of exposure.** For example, a needle-stick injury is more likely to lead to infection than a blood splash.
- **Amount of virus in the infectious material.** For example, blood with a large amount of HBC, HCV, or HIV is more likely to lead to infection than blood with less of the virus.
Important bloodborne pathogens are:

a) Salmonella
b) VZV and SARS-CoV
c) HBV, HCV, and HIV
d) Mycobacterium tuberculosis

**MULTIPLE CHOICE INTERACTION**

[CORRECT ANSWER: C]

[RESPONSE FOR CHOICE A: Incorrect. The correct answer is C.]

[RESPONSE FOR CHOICE B: Incorrect. The correct answer is C.]

[RESPONSE FOR CHOICE C: Correct.]

[RESPONSE FOR CHOICE D: Incorrect. The correct answer is C.]
Listed below are some of the tasks of a healthcare worker. Choose the task that puts the worker at greatest risk for exposure to a bloodborne disease.

<table>
<thead>
<tr>
<th>A. Drawing blood</th>
<th>[CORRECT ANSWER: B]</th>
</tr>
</thead>
<tbody>
<tr>
<td>B. Delivering a breakfast tray</td>
<td>[RESPONSE FOR CHOICE A: Correct. Healthcare workers are at risk whenever they handle blood or OPIM.]</td>
</tr>
<tr>
<td>C. Taking an oral temperature</td>
<td>[RESPONSE FOR CHOICE B: Incorrect. The correct answer is A. Healthcare workers are at risk whenever they handle blood or OPIM.]</td>
</tr>
<tr>
<td>D. Helping a patient change his or her gown</td>
<td>[RESPONSE FOR CHOICE C: Incorrect. The correct answer is A. Healthcare workers are at risk whenever they handle blood or OPIM.]</td>
</tr>
</tbody>
</table>
Summary

You have completed the lesson on bloodborne pathogens.

Remember:
- Important bloodborne pathogens are HIV, HBV, and HCV.
- These pathogens are most commonly spread by sexual contact and sharing drug needles.
- In the healthcare setting, workers can be exposed to bloodborne pathogens through sharps injury, mucous membrane contact, or non-intact skin contact.
- After a healthcare exposure, infection is most likely with HBV. Infection is least likely with HIV.
- Other factors also affect the risk of developing infection after an exposure. These factors include: amount of exposure, route of exposure, and how much virus is present in the infectious material.
Lesson 3: Protecting Yourself

Introduction & Objectives

Welcome to the lesson on protecting yourself from bloodborne pathogens.

After completing this lesson, you should be able to:
- Define Standard Precautions.
- List work practice and engineering controls that help prevent exposure to bloodborne pathogens.
- Recognize the importance of proper hand hygiene.
- Identify the role of personal protective equipment (PPE).

FLASH ANIMATION: 3001.SWF/FLA
### Standard Precautions: Origin

Standard Precautions protect healthcare workers from exposure to blood and OPIM.

Standard Precautions were put together from:
- Universal Precautions (UP), a set of infection-control practices that focus on bloodborne pathogens
- Body Substance Isolation (BSI), a set of infection-control practices that focus on moist body substances

![Image: 3002.JPG]
<table>
<thead>
<tr>
<th>3003</th>
<th>Standard Precautions: When to Use</th>
</tr>
</thead>
</table>

| Standard Precautions are used whenever a healthcare worker may have contact with patient blood. |

<table>
<thead>
<tr>
<th>Whether or not there is visible blood, Standard Precautions also apply to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• All body fluids</td>
</tr>
<tr>
<td>• All secretions</td>
</tr>
<tr>
<td>• All excretions</td>
</tr>
</tbody>
</table>

| The one exception is sweat. Standard Precautions do not apply to sweat. |

| Standard Precautions apply whether or not you think or know the patient has a bloodborne disease. |

| In other words, Standard Precautions are used with *all* patients. |

---

**Standard Precautions apply to:**

- All patients
- All body fluids (except sweat)
### Standard Precautions: Body Fluids

<table>
<thead>
<tr>
<th>Why do Standard Precautions apply to body fluids other than blood?</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Certain other body fluids and materials also carry bloodborne pathogens.</td>
<td></td>
</tr>
<tr>
<td>As a group, these materials are known as “other potentially infectious materials” (OPIM).</td>
<td></td>
</tr>
<tr>
<td>Regardless of the body fluid, use Standard Precautions to help protect against exposure to bloodborne diseases.</td>
<td></td>
</tr>
</tbody>
</table>

#### OPIM include:

- Semen
- Vaginal fluids
- Fluid from around an unborn baby
- Fluid from any human body cavity
- Unfixed tissue or organ
- Human cell, tissue, or organ culture
- Saliva from a dental procedure
- Any other body fluid contaminated with visible blood
- Any body fluid, when it is impossible to tell which body fluid is which
### Standard Precautions: Protecting Yourself

Your employer has reviewed the tasks that put employees in your facility at risk of exposure to bloodborne pathogens.

To decrease this risk, your employer has put safeguards in place.

These safeguards include:
- Engineering controls
- Work practice controls
- Proper housekeeping
- **Personal protective equipment** (PPE)

Standard Precautions are an important basis for these safeguards.

These safeguards also should be documented in your facility's Exposure Control Plan. Refer to the Plan for specific information on the safeguards in your facility.

The following screens provide an overview of safeguards against exposure.
### Engineering Controls

Engineering controls are the first type of safeguard against bloodborne pathogen exposure. These controls are devices with built-in safety features. These features minimize or eliminate the risk of exposure to bloodborne pathogens.

Examples include:
- Safety needles
- Sharps disposal boxes

![Image: 3006.jpg]
Work Practice Controls: Hand Hygiene

<table>
<thead>
<tr>
<th>Work practice controls are the second type of safeguard against exposure. These controls are ways of doing your job, to protect against exposure.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handwashing is a critical work practice control, and a critical part of Standard Precautions.</td>
</tr>
</tbody>
</table>

**Proper hand hygiene is the single most important way to prevent the spread of disease.**

To wash hands properly:
- Apply soap.
- Rub hands together for 15 seconds.
- Rinse with a stream of warm water.
- Dry with a paper towel.

Use a clean paper towel to turn off the faucet.

![IMAGE: 3007.JPG](IMAGE: 3007.JPG)
### Hand Hygiene: When to Wash Wands

<table>
<thead>
<tr>
<th>Hands should be washed:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Before and after each work shift</td>
</tr>
<tr>
<td>• Before and after physical contact with each patient</td>
</tr>
<tr>
<td>• After handling contaminated items such as bedpans, dressings, or urinary drainage bags</td>
</tr>
<tr>
<td>• After removing gloves</td>
</tr>
<tr>
<td>• After using the toilet, blowing the nose, covering a sneeze, etc.</td>
</tr>
<tr>
<td>• Whenever hands become visibly dirty</td>
</tr>
<tr>
<td>• Before eating, drinking, or handling food</td>
</tr>
</tbody>
</table>

![Image: 3008.JPG](image://3008.jpg)
Hand Hygiene: Alcohol-Based Hand Rubs

Alcohol-based hand rubs are an alternative to soap-and-water for hand hygiene.

Alcohol rubs:
- Give good protection against the spread of infection
- Are less drying to the skin than soap-and-water washing
- Are convenient (you do not need a hand-washing sink to use an alcohol rub)

![Image: 3009.GIF](image)

You have two choices for routine hand hygiene in most cases:
- Antimicrobial soap and water
- Alcohol-based hand rub
Hand Hygiene: How & When to Use an Alcohol Rub

To use an alcohol rub:
- Apply enough rub to cover all surfaces of both hands.
- Rub hands until dry. Do not rinse or wipe dry.

You may use an alcohol rub almost any time hands should be washed (see previous screen). In fact, the CDC now recommends alcohol rubs for routine hand decontamination in most clinical situations.

An exception is when hands are visibly dirty. In that case, wash with soap and water.

When hands are visibly dirty, use soap and water.
Other work practice controls to prevent bloodborne pathogen exposure are:
- Dispose of sharps in proper containers.
- Do not recap or bend needles.
### Work Practice Controls: Personal

Additional examples of work practice controls are:
- Do not eat or drink in contaminated areas.
- Do not apply makeup in areas where exposure could occur.
- Do not handle contact lenses in areas where exposure could occur.
- Do not store food in refrigerators with contaminated items.
Work Practice Controls: Linens

A final example of a work practice control is to handle contaminated linen according to your facility’s policy.

Your facility should have guidelines for handling contaminated linen without:
- Exposing your skin or mucous membranes
- Contaminating your clothing
- Transferring microbes to other patients or to the environment
### Housekeeping Practices

Good housekeeping practices also can help protect you against exposure:
- Keep a clean and sanitary workplace.
- Use proper disinfectants when cleaning contaminated areas or spills.
- Keep biohazardous waste separate from ordinary trash.

![IMAGE: 3014.JPG](3014.JPG)
**3015**

**Personal Protective Equipment**

Personal protective equipment (PPE) is special clothing or equipment worn to protect against a hazard.

Using proper PPE around blood and OPIM is another important part of Standard Precautions.

Examples of PPE include:
- Gloves
- Masks
- Eye protection
- Face shields
- Shoe covers
- Lab coats

If you need these items to do your job safely, your employer must:
- Provide the items at no charge to you.
- Train you to use the items properly.
Personal Protective Equipment: Gloves

<table>
<thead>
<tr>
<th>Wear gloves to touch:</th>
<th>IMAGE: 3016.JPG</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Blood</td>
<td></td>
</tr>
<tr>
<td>• Body fluids</td>
<td></td>
</tr>
<tr>
<td>• Secretions</td>
<td></td>
</tr>
<tr>
<td>• Excretions</td>
<td></td>
</tr>
<tr>
<td>• OPIM</td>
<td></td>
</tr>
</tbody>
</table>
### Personal Protective Equipment: Face Protection

To protect the face, you may use the following:
- **Mask**
- **Eye protection (goggles)**
- **Face shields**

These items shield the mucous membranes of the eyes, nose, and mouth.

Wear this type of PPE during tasks that may expose you to splashes or sprays of:
- **Blood**
- **Body fluids**
- **Secretions**
- **Excretions**
3018

Personal Protective Equipment: Protective Clothing

**Protective clothing** includes:
- Gowns
- Hoods
- Surgical caps
- Shoe covers
- Lab coats

These items are used to protect skin and street clothes from contamination.

Wear protective clothing during tasks that may expose you to splashes and sprays of blood or OPIM.
### 3019

**Personal Protective Equipment: Barrier Devices**

**Barrier devices** include mouthpieces and pocket masks.

These should be used when performing CPR.

---

**Remember to remove all PPE before leaving your work area.**
Training in Protecting Yourself

Employers must provide training to all employees at risk of exposure to blood and OPIM.

This training should be:
- Provided to each at-risk employee when he or she starts work
- Repeated once a year

![Image: 3020.jpg]
The single most important defense against the spread of disease is:

a. Using safety needles
b. Proper use of gloves
c. Proper hand hygiene
d. Not recapping needles

### MULTIPLE CHOICE INTERACTION

**Correct: C**

Feedback for A: Not quite. Safety needles are an important engineering control to protect against bloodborne pathogen exposure. However, the single most important defense against the spread of disease is proper hand hygiene. The correct answer is C.

Feedback for B: Not quite. Gloves are an important type of PPE used to protect against bloodborne pathogen exposure. However, the single most important defense against the spread of disease is proper hand hygiene. The correct answer is C.

Feedback for C: Correct.

Feedback for D: Not quite. Not recapping needles is an important work practice control used to protect against bloodborne pathogen exposure. However, the single most important defense against the spread of disease is proper hand hygiene. The correct answer is C.
Gloves should be worn when drawing blood from:

- a. A patient who has AIDS  
- b. A patient who is HIV-positive  
- c. A patient who is documented as HBV-negative, HCV-negative, and HIV-negative  
- d. Both A and B  
- e. All of the above

<table>
<thead>
<tr>
<th>MULTIPLE CHOICE INTERACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correct: E</td>
</tr>
</tbody>
</table>

Feedback for A: Not quite. The correct answer is E. Gloves should be worn whenever there is a possibility of contact with patient blood. The patient’s diagnosis does not matter.

Feedback for B: Not quite. The correct answer is E. Gloves should be worn whenever there is a possibility of contact with patient blood. The patient’s diagnosis does not matter.

Feedback for C: Not quite. The correct answer is E. Gloves should be worn whenever there is a possibility of contact with patient blood. The patient’s diagnosis does not matter.

Feedback for D: Not quite. The correct answer is E. Gloves should be worn whenever there is a possibility of contact with patient blood. The patient’s diagnosis does not matter.

Feedback for E: Correct. Gloves should be worn whenever there is a possibility of contact with patient blood. The patient’s diagnosis does not matter.
Summary

You have completed the lesson on protecting yourself from exposure.

Remember:
- Standard Precautions should be used whenever you may have contact with patient blood or OPIM. This is true whether or not the patient has a diagnosed bloodborne disease.
- Safeguards against exposure to bloodborne pathogens include engineering controls, work practice controls, and use of PPE. Standard Precautions are the basis for these safeguards.
- Proper hand hygiene is a Standard Precaution. It is the single most important way to prevent the spread of infection.
Lesson 4: What to Do if You Are Exposed

Objectives

Welcome to the lesson on what to do if you are exposed.

After completing this lesson, you should be able to:
- Identify what to do after an exposure to blood or OPIM.
- Recognize what should happen during post-exposure follow-up.

FLASH ANIMATION: 4001.SWF/FLA
If you are exposed to blood or OPIM: **WIN**.

This stands for:

- **W**ash the exposed area immediately with soap and water.
- **I**dentify the source of the exposure.
- **N**otify your supervisor immediately.
Regulatory: Standard Precautions

### 4003

<table>
<thead>
<tr>
<th>WIN: Take Action Quickly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quick action can decrease the risk of infection after an exposure.</td>
</tr>
<tr>
<td>IMAGE: 4003.JPG</td>
</tr>
<tr>
<td>Post Exposure Follow-Up</td>
</tr>
<tr>
<td>-------------------------</td>
</tr>
</tbody>
</table>

If you are exposed, your employer must offer you post-exposure evaluation and follow-up care.

This follow-up is:
- Free
- Confidential

You will be referred to a licensed healthcare professional for a medical exam.

Any necessary lab tests will be ordered, at no cost to you.
Post-Exposure Follow-Up: Documentation

Before your medical exam, your employer should:

- Document the route of exposure.
- Document how the exposure occurred.
- Identify and document the source patient (if allowed by state and local law).
- Test the source patient for HIV and HBV (if allowed by state and local law).

This documentation and results of the source patient’s tests must be provided to the healthcare professional who performs your medical exam.

Your blood also may be collected for HIV testing, if you give consent.
<table>
<thead>
<tr>
<th>Post-Exposure Follow-Up: Medical Evaluation &amp; Care</th>
</tr>
</thead>
</table>

Your medical evaluation and follow-up should address:
- The possibility of taking medication to help prevent infection
- How to prevent possible spread of infection to your close contacts
- Any specific symptoms that you report

After your evaluation, the healthcare professional will send a written report to your employer. This report will *not* include your diagnosis.

Your employer must give you a copy of this report within 15 days.
After an exposure: WIN. What does WIN stand for?

A. Write a report. Identify the patient. Note the patient’s condition.
B. Wash the exposed area. Identify the source. Notify your supervisor.
C. Wipe the exposed area. Ice the area immediately. Notify your doctor.
D. Wrap the exposed area. Identify the exposed area. Notify the patient’s doctor.

MULTIPLE CHOICE INTERACTION

[CORRECT ANSWER: B]

[RESPONSE FOR CHOICE A: Incorrect. The correct answer is B. Wash the exposed area. Identify the source. Notify your supervisor.]

[RESPONSE FOR CHOICE B: Correct.]

[RESPONSE FOR CHOICE C: Incorrect. The correct answer is B. Wash the exposed area. Identify the source. Notify your supervisor.]

[RESPONSE FOR CHOICE D: Incorrect. The correct answer is B. Wash the exposed area. Identify the source. Notify your supervisor.]
If you are exposed to blood or OPIM, your employer must offer:
A. Free lab testing
B. Free medical evaluation
C. Medication to help prevent infection
D. All of the above

**MULTIPLE CHOICE INTERACTION**

[CORRECT ANSWER: D]

[RESPONSE FOR CHOICE A: Not quite. The best answer is D. Your employer must offer free follow-up. This includes a free medical exam. It also includes any necessary lab testing. Finally, it includes medication to help prevent infection (if you and your doctor decide that you should take medication).]

[RESPONSE FOR CHOICE B: Not quite. The best answer is D. Your employer must offer free follow-up. This includes a free medical exam. It also includes any necessary lab testing. Finally, it includes medication to help prevent infection (if you and your doctor decide that you should take medication).]

[RESPONSE FOR CHOICE C: Not quite. The best answer is D. Your employer must offer free follow-up. This includes a free medical exam. It also includes any necessary lab testing. Finally, it includes medication to help prevent infection (if you and your doctor decide that you should take medication).]

[RESPONSE FOR CHOICE D: Correct. Your employer must offer free follow-up. This includes a free medical exam. It also includes any necessary lab testing. Finally, it includes medication to help prevent infection (if you and your doctor decide that you should take medication).]
## Summary

You have completed the lesson on what to do after an exposure.

Remember:
- If you are exposed to blood or OPIM: WIN. Wash the area. Identify the source. Notify your supervisor.
- After an exposure, your employer must offer free follow-up evaluation and care.
GLOSSARY

other potentially infectious material (OPIM): fluids, tissues, and other biological materials that could contain and transmit bloodborne pathogens

organism: an individual form of life

transmission: the act of spreading or passing on, especially an infection

bacterium: a type of single-celled microorganism

virus: an acellular disease-causing parasite –

personal protective equipment: special equipment provided by an employer to protect workers from on-the-job hazards
Pre-Assessment Test

1. True or false: Bloodborne pathogens are disease-causing microorganisms carried in a person's bloodstream.

   True
   False

   [Feedback: Disease-causing microorganisms carried in a person's bloodstream are bloodborne pathogens.]

2. Which of the following is an important bloodborne pathogen?

   a. Hepatitis B virus (HBV)
   b. Hepatitis C virus (HCV)
   c. Human immunodeficiency virus (HIV)
   d. All of the above

   [Feedback: HBV, HCV, and HIV are all important bloodborne pathogens.]

3. True or false: There is no vaccine for the hepatitis B virus.

   True
   False

   [Feedback: There is a vaccine for HBV. Employers must offer this vaccine to all workers at risk for on-the-job exposure to blood or OPIM.]

4. Standard Precautions apply to all of the following EXCEPT:

   a. Sweat
   b. Blood
   c. Semen and vaginal fluids
   d. Saliva during dental procedures
[Feedback: Standard Precautions apply to blood. Standard Precautions also apply to all body fluids, secretions, and excretions. The one exception is sweat. Standard Precautions do not apply to sweat.]

5. You are using an alcohol-based hand rub. True or False: You should 1) apply the product, 2) rub your hands until dry, and 3) rinse with water.

True
False

[Feedback: Alcohol rubs should not be rinsed or wiped off. After applying the product, just rub your hands until they are dry.]

6. Which of the following is an example of personal protective equipment (PPE)?

a. Gloves
b. Lab coat
c. Shoe covers
d. All of the above

[Feedback: Gloves, lab coats, and shoe covers are all PPE.]

7. You are exposed to a patient’s blood. True or False: Quick action can decrease the risk of becoming infected.

True
False

[Feedback: By acting quickly, an exposed worker can decrease the risk of infection.]

8. You are exposed to a patient’s blood. Your employer refers you to a doctor for medical evaluation and follow-up care. The doctor should talk to you about:

a. Any symptoms that you report
b. The possibility of taking medication to prevent infection
c. How to prevent the possible spread of infection to your close contacts
d. All of the above

[Feedback: The doctor should talk to you about all of these issues.]

9. Bloodborne pathogens may be spread through:
   a. Sexual contact
   b. Sharing IV drug needles
   c. Mucous membrane contact with blood
d. All of the above

[Feedback: Bloodborne pathogens are most commonly spread through sexual contact and sharing IV drug needles. In the healthcare setting, bloodborne pathogens also may be spread by sharps injury, non-intact skin contact, or mucous membrane contact with blood or OPIM.]

10. Healthcare workers are sometimes exposed to materials contaminated with HBV, HCV, or HIV. These workers do not always become infected. There are several factors that affect the risk of infection after an exposure. These factors include:

   a. Route of exposure
   b. Amount of exposure
   c. Amount of virus in the contaminated material
d. All of the above

[Feedback: Larger exposures are more likely to cause infection than smaller exposures. Puncture exposures are more likely to cause infection than skin or mucous membrane exposures. Infection is more likely if there are many copies of the virus in the contaminated material.]
**FINAL EXAM**

1. Handwashing is the single best defense against the spread of disease.
   
   a. TRUE  
   b. FALSE  

Correct: True  
Rationale: Handwashing is your best defense against the spread of disease.

2. Standard Precautions help:
   a. Protect patient confidentiality  
   b. Protect patients from exposure to safety hazards  
   c. Protect healthcare workers from exposure to violent patients  
   d. Protect healthcare workers from exposure to potentially infectious materials

Correct: Protect healthcare workers from exposure to potentially infectious materials  
Rationale: Standard Precautions are used by healthcare workers to protect against exposure to blood or OPIM.

3. Which of the following is an unsafe work practice that could result in exposure to a bloodborne pathogen?
   a. Wearing gloves to draw a patient’s blood  
   b. Wearing a mask and goggles during a surgical procedure  
   c. Storing food in a refrigerator that contains patient blood samples  
   d. All of the above  
   e. None of the above

Correct: Storing food in a refrigerator that contains patient blood samples
Rationale: Never store food in a refrigerator with biological materials.

4. A healthcare worker is exposed to blood from a sick patient. This healthcare worker is most likely to become infected if the patient has:

   a. AIDS
   b. Hepatitis B
   c. Hepatitis C
   d. Tuberculosis

Correct: HBV
Rationale: Tuberculosis is not a bloodborne disease. Among bloodborne diseases, HBV is more transmissible than HCV or HIV. This means a person exposed to HBV is most likely to become infected.

5. Early symptoms of HIV infection are often flu-like.

   a. TRUE
   b. FALSE

Correct: True
Rationale: Many of the symptoms of early HIV infection are similar to symptoms of the flu.

6. Healthcare workers are at risk for exposure to bloodborne pathogens by:

   a. Sharps injury
   b. Non-intact skin contact with blood or OPIM
   c. Mucous membrane contact with blood or OPIM
   d. All of the above
   e. None of the above
Correct: All of the above
Rationale: Healthcare workers may be exposed to bloodborne disease through sharps injury, non-intact skin contact, or mucous membrane contact.

7. A healthcare worker is exposed to a patient’s blood. A large volume of blood splashes into her mouth. The patient’s blood is tested. The test is positive for HIV. However, there are very few copies of the virus in the blood sample. Which of the following changes to this scenario would decrease the worker’s risk of becoming infected?

   a. The patient has many copies of HIV in his or her blood, instead of few copies.
   b. The worker is splashed with a small volume of blood, instead of a large volume.
   c. The worker is exposed to the patient’s blood through a needle-stick injury, instead of through a blood splash.
   d. All of the above
   e. None of the above

Correct: The worker is splashed with a small volume of blood, instead of a large volume.

Rationale: Larger exposures are more likely to cause infection than smaller exposures. Puncture exposures are more likely to cause infection than skin or mucous membrane exposures. Infection is more likely if there are many copies of the virus in the contaminated material.

8. Bloodborne pathogens are spread ONLY through direct contact with contaminated blood.

   a. TRUE
   b. FALSE

Correct: False
Rationale: Bloodborne pathogens can be spread through contact with blood. These pathogens also can be spread through contact with certain other body fluids and biological materials.
9. At-risk employees should be trained on bloodborne pathogen exposure:
   a. Initially
   b. Every two years
   c. Every five years
   d. Initially and annually

Correct answer: Initially and annually.
Rationale: Employees are trained on bloodborne pathogen exposure when they are first hired or assigned to at-risk work. After that, employees repeat their training annually.

10. True or False: After an exposure to blood or OPIM, immediately WIN: Wash the area. Identify the source. Notify your supervisor. Acting quickly can reduce the risk of becoming infected.
   a. TRUE
   b. FALSE

Correct: True
Rationale: After an exposure, immediately WIN. This can reduce the risk of becoming infected.

11. After an exposure incident:
   a. The route of exposure should be documented.
   b. The source patient should be tested for HBV and HIV (if legal).
   c. The source patient should be identified and documented (if legal).
   d. All of the above
   e. None of the above
Correct: All of the above
Rationale: After an exposure incident, the route and circumstances of the exposure should be documented. If state and local laws allow, the source patient should be identified, documented, and tested for HBV and HIV.