



**American
Red Cross**

American Red Cross Bloodborne Pathogens Training: Preventing Disease Transmission

INSTRUCTOR'S MANUAL

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BLOODBORNE PATHOGENS TRAINING: PREVENTING DISEASE TRANSMISSION COURSE

COURSE OUTLINE

Activity	Time
Introduction to the Course	10 minutes
OSHA Bloodborne Pathogens Standard	10 minutes
How Infections Occur	35 minutes
Exposure Control Plan	40 minutes
Exposure Incidents	15 minutes
Wrap-Up	5 minutes
Closing	5 minutes
Total Course Time	2 hours

Instructor's Note: This outline provides you with an overview of the knowledge and skills to be taught in the American Red Cross Bloodborne Pathogens Training: Preventing Disease Transmission course. It is one class session for a total time of 2 hours.

BLOODBORNE PATHOGENS TRAINING: PREVENTING DISEASE TRANSMISSION COURSE



Course Length: 2 hours

LESSON OBJECTIVES

After completing this lesson, participants should be able to:

- Define bloodborne pathogens.
- Identify the bloodborne pathogens of primary concern.
- List four ways bloodborne pathogens can enter a person's body.
- Describe the importance of PPE and hand washing in reducing the risk of bloodborne pathogen transmission.
- Identify work practices that help eliminate or reduce the risk of exposure.
- Demonstrate how to remove disposable gloves properly.
- List procedures to follow if exposure occurs.

GUIDANCE FOR THE INSTRUCTOR

To complete this lesson and meet the lesson objectives, you must:

- Discuss all points in the introduction to the course.
- Conduct the lecture on bloodborne pathogens.
- Show the video segment, "How Infections Occur"
- Lead the guided discussion and conduct a lecture on the spread of pathogens.
- Lead the guided discussion about an exposure control plan.
- Show the video segments, "The Exposure Control Plan" and "Personal Protective Equipment"
- Conduct the small-group activity on personal protective equipment (PPE).
- Conduct the lecture on the importance of hand washing.
- Show the video segment, "Engineering and Work Practice Controls," and lead the guided discussion on engineering and work practice controls.
- Conduct the lecture on equipment and spill cleanup.
- Conduct the skill session for Removing Disposable Gloves.
- Show the video segment, "Exposure Incidents," and conduct the lecture on what to do if an exposure incident occurs.
- Complete the Wrap-Up.
- Conduct the Closing.

MATERIALS, EQUIPMENT AND SUPPLIES

- Non-latex disposable gloves (one pair per participant)
- Examples of PPE, such as gowns, eye protection and breathing barriers
- Examples of biohazard equipment as appropriate

TOPIC: INTRODUCTION TO THE COURSE

Time: 10 minutes

<p>Discussion</p>	<ul style="list-style-type: none"> ■ Welcome participants and briefly introduce yourself and co-instructors, if applicable. Give your background and identify yourself as an American Red Cross instructor. ■ Have participants briefly introduce themselves and write their names on name tags or name tents and display them. ■ Review facility policies and procedures, and give locations of restrooms, water fountains and break areas. Also point out where exits are located as well as where automated external defibrillators (AEDs) are located. <p><i>Instructor's Note: If this training involves the same participants from a previous session, omit the previous points of the introduction.</i></p> <ul style="list-style-type: none"> ■ Review the course outline. ■ Point out and/or distribute the fact sheet/skill sheet, as necessary, which participants will use during the course.
<p>Lecture Points</p>	<ul style="list-style-type: none"> ■ The purpose of the Bloodborne Pathogens Training: Preventing Disease Transmission course is to provide participants with an understanding of: <ul style="list-style-type: none"> ○ The intent of the Bloodborne Pathogens regulation issued by the federal Occupational Safety and Health Administration (OSHA). ○ How bloodborne pathogens are spread. ○ Precautions to prevent exposure incidents. ○ How to recognize, report and follow up on exposure to infectious materials. ■ To receive the course completion certificate for Bloodborne Pathogens Training: Preventing Disease Transmission, you must attend the entire course. ■ Upon successful course completion, each participant will receive an American Red Cross Universal Certificate indicating Bloodborne Pathogens Training that is valid for 1 year. Training must be completed annually as required by OSHA regulations.

TOPIC: OSHA BLOODBORNE PATHOGENS STANDARD

Time: 10 minutes

<h3>OSHA REGULATIONS</h3>	
<p>Lecture Points</p>	<ul style="list-style-type: none"> ■ OSHA has issued regulations about on-the-job exposure to bloodborne pathogens. ■ OSHA requires that employers reduce or remove hazards from the workplace that may place employees in contact with infectious materials. ■ These regulations apply to employees who may be exposed to blood or other body substances that could cause infection. ■ The Bloodborne Pathogens Standard was revised in 2001 in response to passage of the federal Needlestick Safety and Prevention Act. <p><i>Instructor's Note: Refer participants to their fact sheets for a listing of specific employer responsibilities and to the OSHA website for additional information about the Bloodborne Pathogens Standard (29 CFR part 1910.1030).</i></p>

BLOODBORNE PATHOGENS	
Lecture Points	<ul style="list-style-type: none"> ■ Bloodborne pathogens, such as bacteria and viruses, are present in blood and body fluids and can cause disease. ■ The major bloodborne pathogens of concern to those responding to a first aid emergency are hepatitis B, hepatitis C and HIV.
THE SPREAD OF PATHOGENS	
Large-Group Activity	<ul style="list-style-type: none"> ■ Have participants list ways in which someone who responds to a first aid situation, including breathing or cardiac emergencies, may be exposed to bloodborne pathogens. ■ Be sure to emphasize exposure through injuries from needles and other sharps devices and direct and indirect contact with skin and mucous membranes.
Video	<ul style="list-style-type: none"> ■ Show the video segment, “How Infections Occur” (5:26). Answer participants’ questions about the segment.
Guided Discussion and Lecture Points	<ul style="list-style-type: none"> ■ Ask participants: As you learned in the video, four conditions must be met for any disease to be spread. What are they? <i>Answer: Responses should include the following:</i> <ul style="list-style-type: none"> ○ A pathogen must be present. ○ A sufficient quantity of the pathogen to cause disease must be present. ○ A person must be susceptible to the pathogen. ○ The pathogen must pass through the correct entry site (for example, eyes, mouth and other mucous membranes or skin pierced or broken by needlesticks, bites, cuts, abrasions and other means). ■ Bloodborne pathogens spread primarily through direct or indirect contact with infected blood or other body fluids. ■ Bloodborne pathogens do not spread by food or water or by casual contact, such as hugging or shaking hands. ■ Direct contact occurs when infected blood or body fluid from one person enters another person’s body at a correct entry site. ■ Indirect contact occurs when a person touches an object that contains the blood or other body fluid of an infected person and that infected blood or body fluid enters the body through a correct entry site. ■ Other pathogens can enter the body through droplet transmission, which occurs when a person inhales droplets from an infected person, such as through a cough or sneeze. ■ Vector-borne transmission occurs when an infectious source, such as an animal bite or an insect bite or sting, penetrates the body’s skin.

<p>Guided Discussion</p>	<ul style="list-style-type: none"> ■ Ask participants to describe what they think an exposure control plan is. ■ Clarify that an exposure control plan, required by OSHA, is a written document outlining the protective measures an employer will take to eliminate or minimize incidents of employee exposure. ■ Urge participants to review the exposure control plan at their places of employment.
<p>Video</p>	<ul style="list-style-type: none"> ■ Show the video segments, “The Exposure Control Plan” (2:10) and “Personal Protective Equipment” (2:01). Answer participants’ questions about the segments.

PERSONAL PROTECTIVE EQUIPMENT

<p>Small-Group Activity</p>	<ul style="list-style-type: none"> ■ Divide participants into several small groups. Ask each group to identify examples of PPE that the participants would use for their individual jobs and possible situations when each would be used. ■ Have each group share its information with the rest of the class. Point out similarities for when each type of PPE would be used. ■ Show participants examples of different types of PPE.
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HAND HYGIENE

<p>Lecture Points</p>	<ul style="list-style-type: none"> ■ Hand washing is the most effective measure to prevent the spread of infection. ■ Wash hands before providing care, if possible, and always after providing care, whether gloves are worn. ■ Use alcohol-based hand sanitizers when soap and water are not available and the hands are not visibly soiled.
<p>Video</p>	<ul style="list-style-type: none"> ■ Show the video segment, “Engineering and Work Practice Controls” (3:47). Answer participants’ questions about the segment.

ENGINEERING AND WORK PRACTICE CONTROLS

<p>Guided Discussion</p>	<ul style="list-style-type: none"> ■ Ask participants to define the meaning of engineering controls and to give examples. <i>Answers: Responses should include the following:</i> <ul style="list-style-type: none"> ○ <i>Engineering controls are measures to isolate or remove a hazard from the workplace.</i> ○ <i>Examples include sharps disposal containers, self-sheathing needles, safer medical devices, biohazard containers and labels, and PPE.</i> ■ Ask participants to differentiate engineering controls from work practice controls. <i>Answers: Responses should include the following:</i> <ul style="list-style-type: none"> ○ <i>Work practice controls focus on changing the way a task is carried out; engineering controls focus on isolating or removing hazards from the workplace.</i>
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ENGINEERING AND WORK PRACTICE CONTROLS *Continued*

- Give examples of work practice controls, such as:
 - Disposing of sharps in puncture-resistant, leak-proof, labeled containers.
 - Avoiding the splashing, spraying and splattering of droplets of blood or other potentially infectious materials.
 - Removing and disposing of soiled protective clothing as soon as possible.
 - Cleaning and disinfecting all soiled equipment and work surfaces.
 - Using good hand hygiene.
 - Not eating, drinking, smoking, applying cosmetics or touching body areas in environments where exposure is possible.
 - Isolating contaminated areas so other employees or people do not walk through and become exposed.

EQUIPMENT AND SPILL CLEANUP

Lecture Points

- **Take the following steps to clean up spills:**
 - **Wear disposable gloves and other PPE.**
 - **Take steps to protect others by roping off or placing cones around the area so others are not accidentally exposed by walking through it.**
 - **Clean up spills immediately or as soon as possible after the spill occurs.**
 - **If the spill is mixed with sharp objects, such as broken glass and needles, do not pick these up with your hands. Use tongs, a broom and dustpan, or similar items.**
 - **Dispose of the absorbent material used to collect the spill in a labeled biohazard container.**
 - **Flood the area with a fresh disinfectant solution. Use a commonly accepted disinfectant of approximately 1½ cups of liquid chlorine bleach to 1 gallon of water (1 part bleach to 9 parts water, or about a 10% solution) and allow it to stand for at least 10 minutes.**
 - **Use appropriate material to absorb the solution, and dispose of it in a labeled biohazard container.**
 - **Scrub soiled boots, leather shoes and other leather goods, such as belts, with soap, a brush and hot water. If you wear a uniform to work, wash and dry it according to the manufacturer's instructions.**

REMOVING DISPOSABLE GLOVES

Skill Session

- Give each participant a pair of non-latex disposable gloves and have them put on the gloves.
- Guide participants through the steps listed on the Removing Disposable Gloves skill chart.
- Point out any common errors, such as touching the bare skin with a contaminated glove or touching a portion of the glove that is likely contaminated with a bare hand.

TOPIC: EXPOSURE INCIDENTS

Time: 15 minutes

Video	<ul style="list-style-type: none">■ Show the video segment, “Exposure Incidents” (1:56). Answer participants’ questions about the segment.
Lecture Points	<ul style="list-style-type: none">■ Immediate steps to take following an exposure incident include:<ul style="list-style-type: none">○ Cleaning the contaminated area thoroughly with soap and water.○ Flushing splashes of blood or other potentially infectious materials near the mouth and nose with water.○ Irrigating the eyes, if exposed, with clean water, saline or sterile irrigants for 20 minutes.■ Steps to take after an exposure incident include:<ul style="list-style-type: none">○ Immediately reporting the incident to the appropriate person identified in the employer’s exposure control plan and to the emergency medical services (EMS) personnel taking over care of the victim.○ Writing down what happened, including the time, date and circumstances of the exposure, actions taken after the exposure and any other information required by the employer.○ Seeking immediate follow-up care according to the employer’s exposure control plan.

WRAP-UP

Time: 5 minutes

- In review, ask participants the following questions and answer any participants’ questions:
 - **Which bloodborne pathogens are of primary concern for someone who responds to a first aid emergency?**
Answer: Bloodborne pathogens of primary concern are hepatitis B, hepatitis C and HIV.
 - **What four conditions are required for an infection to spread?**
Answer: Responses should include the following:
 - *Presence of a pathogen*
 - *Sufficient quantity of the pathogen*
 - *Susceptible person*
 - *Passage of pathogen through the correct entry site*
 - **A victim has sustained a deep cut to his upper arm. The wound is open and blood is spurting from the wound. What PPE should you use?**
Answer: Responses should include the following:
 - *Disposable gloves*
 - *Face shield or mask*
 - *Disposable gown*
 - **After providing care to a victim, you notice that your gloves have become torn and some of the victim’s blood is on the skin of your hands. What should you do?**
Answer: Responses should include the following:
 - *Immediately remove the gloves and clean the hands thoroughly with soap and water.*
 - *Report the incident to the appropriate person and to the EMS providers taking over the victim’s care.*
 - *Write down what happened.*
 - *Seek immediate follow-up care according to the employer’s exposure control plan.*

CLOSING

Time: 5 minutes

- Tell participants who have attended the entire course that they have successfully passed the course.
- Thank all course participants for attending the course.
- Inform participants of other Red Cross courses that they may be interested in taking and of volunteer opportunities.

Skill Chart

Participants must perform the steps listed in the skill chart in the correct order.

REMOVING DISPOSABLE GLOVES

Note: *To remove gloves without spreading germs, never touch your bare skin with the outside of either glove.*

1. Pinch the palm side of one glove near your wrist. Carefully pull the glove off so that it is inside out.
2. Hold the glove in the palm of your gloved hand. Slip two fingers under the glove at the wrist of the gloved hand.
3. Pull the glove until it comes off, inside out. The first glove should end up inside the glove you just removed.
4. Always wash your hands after removing gloves.

Notes:

- *Always dispose of gloves and other PPE in a proper biohazard container.*
- *Wash hands thoroughly with soap and running water, if available. Otherwise, rub hands thoroughly with an alcohol-based hand sanitizer if hands are not visibly soiled.*