INFECTION CONTROL

Protecting Yourself and Others
HEALTH HAZARDS ON THE JOB

Tuberculosis. Hepatitis. AIDS. As a health care worker in today's world, it may seem that all you hear about are communicable diseases and the increasing risks to your health. Although you shouldn't be overly alarmed, you need to be aware of those risks and the simple ways you can avoid them—to protect yourself as well as your coworkers and patients.

Hidden Dangers
Some health risks in your workplace are obvious. Others are not. Infectious germs may be anywhere around you. From needlesticks to coughing patients, a variety of accidents and situations could expose you to infection—and lead to life-threatening consequences. How should you deal with these possible dangers? Start by understanding which infectious diseases can be spread in your workplace.

The Risk of Infection
Health care workers are at risk for exposure to infectious diseases such as the following:

- Tuberculosis (TB), a bacterial infection that affects the lungs, but can also be present in other parts of the body
- Hepatitis B (HBV), a virus that can cause severe liver damage and even death
- Human immunodeficiency virus (HIV), a virus that causes acquired immune deficiency syndrome (AIDS)

Other health risks in your workplace include hepatitis C, malaria, syphilis, lice, scabies, measles, cytomegalovirus, chickenpox, herpes, staph infections, colds, flu, and diarrheal infections. If you suspect that you or a patient has been infected, be sure to report it according to your employer's policies.

This booklet is not intended as a substitute for your employer's health and safety policies. Only your employer can establish the specific guidelines appropriate for your job.

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Simple Steps to Protection

Once you’re aware of the risks around you, you need to know the steps for preventing exposure to those risks. This booklet will show you how to protect yourself and others against several specific infections by using the right equipment and practicing safe behaviors. No matter what you come into contact with, two of your best defenses are handwashing and the use of personal protective equipment (PPE) — specialized clothing or equipment worn for protection against a hazard.

Wash Your Hands Often

Removing germs through handwashing is vital protection against many types of infection. Always wash your hands before and after you have contact with a patient or anything a patient has touched. Remember the following:

- Wash your hands immediately after removing gloves — and before eating, drinking, smoking, applying makeup, or handling contact lenses.
- Work up a good lather with nonabrasive soap and running water. Clean between your fingers and around your nails. Then rinse well.
- If your hands or any other part of your body has come into contact with blood or other body fluids, immediately wash exposed skin thoroughly.

Use PPE

Designed to protect you from a variety of hazards, PPE helps guard your skin, eyes, mouth, and personal clothing from exposure to infectious germs. Your employer will provide the type of PPE that is most effective for your particular job. Never wear PPE that’s damaged or soiled. After use, remove PPE and place it in the proper container for cleaning, decontamination, or disposal.
TUBERCULOSIS

After several decades of decline, tuberculosis (TB) is on the rise again in the United States. An infectious disease that usually begins in the lungs, TB may spread to the brain, kidney, or spine. Most people who are infected with TB will never get the active disease, but it could progress to disease if not treated with medication.

How TB Infection Occurs

TB can be spread when a person with active TB disease coughs, shouts, or laughs, spraying bacteria-contaminated droplets into the air. The infection is most likely to be spread in small, poorly ventilated rooms, and usually results from exposure over a period of time.

Inactive TB

In most people, infectious TB bacteria remain inactive for a lifetime—their immune systems prevent the infection from progressing. A person who is infected with inactive TB isn’t sick, doesn’t have symptoms, and can’t infect others. In fact, the only way to know if you’ve been infected is to get tested. That’s why it’s vital for health care workers to have a TB skin test once or twice a year. If you are infected, medication can help ensure that it will not become an active disease.

Active TB

Inactive infection becomes active disease if the TB bacteria grow and begin to attack a body organ, often the lungs. Symptoms may include persistent coughing, fatigue, weight loss, fever, loss of appetite, and night sweats. If left untreated, TB can be fatal. Fortunately, when taken properly, medication can completely cure the disease. People who stop their medications or who take them irregularly may develop drug-resistant TB, which is sometimes impossible to cure.

Medication for TB must be taken consistently and completely to cure the disease.
Controlling TB

You and your facility can use a variety of methods to limit the spread of TB:

- Place TB patients in negative-pressure isolation rooms with a minimum of six air changes per hour (preferably 10–12 air changes per hour).
- Ask TB patients to cover their noses and mouths with tissue when they cough or sneeze. When transporting TB patients outside of their rooms, be sure they wear surgical masks.
- Use a HEPA filter hood to prevent the spread of TB germs when inducing and collecting sputum.

Some facilities also use the following:

- Portable and stand-alone HEPA filters to decrease infectious droplets in areas such as waiting rooms, clinic rooms, or isolation rooms.
- Ultraviolet germicidal lamps to kill TB germs in areas that need extra protection such as small rooms with poor ventilation.
- Isolation barriers to help separate other staff (such as admitting personnel and social workers) from infected patients.

Preventing Active TB

To allow early detection and treatment, you need to have periodic TB screening. If your skin test changes from negative to positive, you'll need treatment to prevent the disease from becoming active. Preventive treatment especially important for TB-infected people with HIV, who are at high risk of developing active TB.
Whether or not you work directly with patients, you need to protect yourself from exposure to bloodborne pathogens (disease-causing germs carried by blood or certain body fluids). Knowing how these infections are spread will help you prevent them.

How Bloodborne Diseases Are Spread

Many infectious germs are carried in blood and in body fluids where blood may be present (such as saliva, semen, fecal matter, and amniotic fluid). If infected blood comes into contact with any opening or break in your skin, you may be exposed to disease. Two of the most common and dangerous types of bloodborne disease that may infect health care workers are caused by the hepatitis B virus (HBV) and the human immunodeficiency virus (HIV).

Hepatitis B

Hepatitis B infection can lead to liver damage, cancer, and even death. Symptoms may be mild and flu-like. Some people have no symptoms at all.

A vaccination series is available to prevent hepatitis B infection. Your employer provides the hepatitis B vaccination free of charge to employees who are at risk for bloodborne exposure.

HIV

Although HIV is much less likely than hepatitis B to be spread in the workplace, it could potentially be spread anywhere that blood is present. HIV weakens the body's immune system and causes AIDS. Symptoms may include weight loss, night sweats, fever, fatigue, gland pain and swelling, and muscle or joint pain. There is currently no vaccine for HIV and no cure for AIDS.

Other Bloodborne Diseases

Blood may carry other serious infections, such as hepatitis C, malaria, and syphilis. If discovered early enough, these conditions can usually be treated with medication.
OSHA Regulations

To protect you and other employees who may be exposed to bloodborne pathogens, OSHA (Occupational Safety and Health Administration) created specific regulations. The rest of this booklet describes how you and your employer can use these rules to help ensure your safety on the job. The key elements of the regulations include an exposure control plan, universal precautions, engineering controls, and work practice controls.

Exposure Control Plan

Your employer’s exposure control plan is a document that describes when or where an exposure could occur, universal precautions, exposure reporting procedures, and training requirements. You have the right to see that plan at any time. Ask your supervisor for more information.

Universal Precautions

The idea behind universal precautions is simple but effective: Since you don’t always know whose blood is carrying infectious germs, treat all blood and certain body fluids as potentially infectious. To help you avoid bloodborne hazards, OSHA requires protective controls, including the following:

Engineering controls, such as safely mounted sharps containers, are your company’s technological means of isolating or removing hazards from the workplace to reduce your exposure to blood (see page 8).

Work practice controls, such as avoiding contact with blood, are ways that you can perform your job more safely to prevent exposure to bloodborne pathogens (see pages 9–11).
Engineering Controls

By making the work environment safer, your employer can greatly reduce your risk of exposure to bloodborne infections. Sharps containers and medical safety devices are examples of protective engineering controls.

Sharps Containers

Immediately after using sharps, dispose of them in containers that are:

- Puncture-resistant
- Leakproof on sides and bottom
- Labeled or color-coded as biohazardous (see page 9)
- Closable
- Located in areas that can be safely and conveniently reached

Safer Medical Devices

Many needles and other medical instruments now have safety features to help prevent accidents and exposure to disease. These devices include:

- Self-sheathing needles
- Needleless IV connectors or connectors with recessed needles
- Phlebotomy devices and lancets with safety features such as retractable blades
- Face masks used for mouth-to-mouth resuscitation, or cardiopulmonary resuscitation (CPR)
Work Practice Controls

Engineering controls alone won't do much good unless you follow safe work practices. Proper waste disposal, safe needle handling, and thorough cleaning are a few important ways to help ensure on-the-job safety.

Marking Infectious Materials

Any potentially infectious materials must be labeled or color-coded as biohazardous. Labels must also be placed on cabinets, refrigerators, freezers, or any other containers holding blood or other potentially infectious materials.

Disposing of Waste

Whether you're disposing of used needles, blood-stained towels, tissue specimens, or other contaminated materials, always follow your facility's waste disposal guidelines. All medical waste should be stored in labeled, closed containers that can hold the contents without leakage during handling, storage, and transport.

The biohazard symbol warns that a container's contents are potentially infectious.
BLOODBORNE PATHOGENS

More Work Practice Controls

Handling Needles
One of the most important ways to prevent exposure to infection is to handle needles carefully. Keep the following guidelines in mind:

- Never bend or break needles.
- Never remove needles from disposable syringes.
- Recap needles only when absolutely necessary. If you do, use an approved recapping method.
- Always dispose of needles in proper sharps containers.
- If a needlestick occurs, wash the affected area thoroughly with soap and running water. Then report it according to your employer’s policies.

Removing Gloves
To prevent contact with any blood that may be on your gloves, remove them carefully, using the following steps:

1. Peel one glove off from wrist to fingertips and hold it in the other, gloved hand.
2. Peel the other glove off from the inside with your exposed hand, holding the first glove inside the second.
3. Properly dispose of the gloves. Then wash your hands thoroughly.

Staying Aware
Throughout the working day, pay attention to your activities and your environment. Do not eat, drink, apply cosmetics, or handle contact lenses in patient care areas or any other areas of possible contamination.