Annual Mandatory Training (Acute Care) Library

Rapid Regulatory Compliance: Clinical: Part II – An HCCS Regulatory Course

HLC Version: 1

Introduction	
Welcome to Rapid Regulatory Compliance: Clinical: Part II. *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.* *If you have concerns about any aspect of the safety or quality of patient care in your organization, be aware that you may report these concerns directly to The Joint Commission.*	
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Course Rationale

This course will rapidly review and update your knowledge of the following topics:

- Safety
- Emergency preparedness
- Infection control

For additional information on the topics discussed in this course, please refer to the HealthStream Regulatory course titles listed on the right.

Courses discussing topics in detail:

- *General Safety*
- *Fire Safety*
- *Electrical Safety*
- *Radiation and MRI Safety*
- *Ergonomics*
- *Back Safety*
- *Lifting and Handling Patients*
- *Preventing Slips, Trips, and Falls in the Workplace*
- *Latex Allergy*
- *Hazard Communication*
- *Workplace Violence*
- *Emergency Preparedness*
- *Infection Control*
- *Healthcare-Associated Infection*
- *Hand Hygiene*
- *Standard Precautions: Bloodborne Pathogens and Other Potentially Infectious Materials*
- *Transmission-Based Precautions: Airborne*
- *Transmission-Based Precautions: Contact and Droplet*
- *Personal Protective Equipment*

Course Objectives

After completing this review, you should be able to:

- Identify personal and facility safety concerns for healthcare workers.
- Cite best practices to ensure hospital safety for patients and healthcare workers.
- Identify components of an Emergency Operations Plan.
- Identify infection-related risks for patients and healthcare workers.
- Identify best practices to control the spread of infection in the healthcare environment.
- Cite key components of the Bloodborne Pathogens Standard.

Course Outline	
This introductory lesson gave the course rationale. Lesson 2 will discuss aspects of safety including personal and facility concerns and best practices. Lesson 3 will focus on emergency preparedness. Lesson 4 will discuss infection control. This lesson will provide information on best practices to control the spread of infection in the healthcare environment.	Lesson 1: Introduction Lesson 2: Safety • General safety • Fire safety • Electrical safety • Radiation safety • MRI safety • Ergonomics • Back safety • Lifting and handling patients • Slips, trips, and falls • Latex allergy • Hazard communication • Security and workplace violence • Reporting incidents Lesson 3: Emergency Preparedness • Disaster events • Emergency Operations Plans Lesson 4: Infection Control • Healthcare associated infection • Hand hygiene • Environmental hygiene • Antibiotic use • Bloodborne pathogens • Airborne precautions • Contact precautions • Droplet precautions • Personal protective equipment • Personal responsibility
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Lesson 2: Safety

Introduction	
Welcome to the lesson on safety.	Lesson 2: Safety • General safety • Fire safety • Electrical safety • Radiation safety • MRI safety • Ergonomics • Back safety • Lifting and handling patients • Slips, trips, and falls • Latex allergy • Hazard communication • Security and workplace violence • Reporting incidents
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General Safety

Healthcare facilities have many potential hazards.

OSHA [glossary] separates these hazards into five general categories:

- Biological
- Chemical
- Psychological
- Physical
- Environmental/ mechanical

As shown in the table on the next screen, take appropriate measures to:

- Eliminate as many of these hazards as possible
- Safeguard against exposure to the hazards that cannot be eliminated

Note: Many of the hazards mentioned in the table are addressed in greater detail later in the lesson or the course.

General Safety: Hazards and Safeguards

Hazard Category	Definition	Examples	Safeguards
Biological	Infectious agents	HIV, VRE, MRSA, HBV, HCV, TB	Infection-control measures (patient placement, PPE [glossary], hand hygiene, etc.)
Chemical	Toxic or irritating materials	Detergents, solvents, disinfectants, sterilizing agents, waste anesthetic gases, hazardous drugs, mercury	Engineering controls, work-practice controls, appropriate PPE
Psychological	Factors that create or increase emotional stress or strain	Working with terminally ill patients, patient deaths, overwork, understaffing, tight schedules, equipment malfunctions	Stress management, relaxation exercises, meditation
Physical	Agents with the ability to cause physical harm	Radiation, lasers, noise, electricity and electrical equipment, extreme temperatures	Various, depending on the hazard
Environmental & mechanical	Factors that cause or increase the risk of accident, injury, strain, or discomfort	Lifting and moving patients, tripping hazards, poor air quality, slippery floors, cluttered or obstructed work areas or passageways	Maintenance of a safe work environment, prompt reporting of hazardous conditions

Fire Safety: Prevention

Prevention is the best defense against fire.

To help prevent fires related to the common cause of **smoking**:

- Follow your facility's smoking policy.
- Smoke only in designated areas.
- Instruct visitors and authorized patients to smoke only in designated areas.

To help prevent fires related to the common cause of **electrical malfunction**:

- Remove damaged or faulty equipment from service.
- Submit malfunctioning equipment for repair.

To help prevent fires related to the common cause of **equipment misuse**:

- Do not use any piece of equipment that you have not been trained to use.

Fire Safety: Safeguards in the Event of Fire

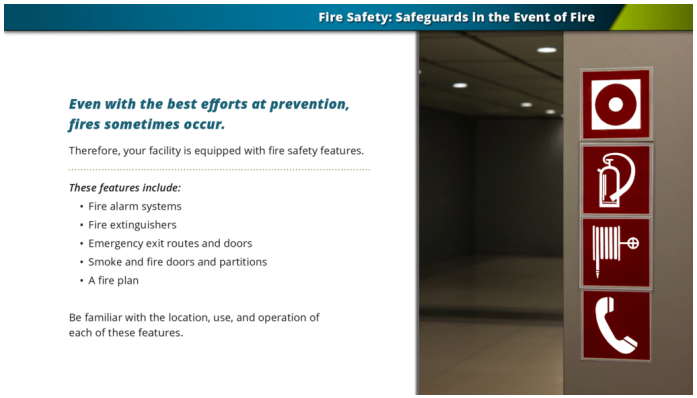
Even with the best efforts at prevention, fires sometimes occur.

Therefore, your facility is equipped with fire safety features.

These features include:

- Fire alarm systems
- Fire extinguishers
- Emergency exit routes and doors
- Smoke and fire doors and partitions
- A fire plan

Be familiar with the location, use, and operation of each of these features.



Fire Safety: Response	
When you hear the fire alarm in your facility, you may not know if it is a drill or a true fire. Treat the alarm as if it were a true emergency. Respond using the **RACE** protocol: • **R: Remove or Rescue** • **A: Alarm or Alert** • **C: Confine or Contain** • **E: Extinguish or Evacuate** Click on each item for a brief review.	**R**: Remove or **Rescue** Rescue or remove all patients from the immediate area of the fire.
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Fire Safety: Response

When you hear the fire alarm in your facility, you may not know if it is a drill or a true fire. Treat the alarm as if it were a true emergency.

Respond using the **RACE** protocol:

- **R: Remove or Rescue**
- **A: Alarm or Alert**
- **C: Confine or Contain**
- **E: Extinguish or Evacuate**

Click on each item for a brief review.

A: **Alarm** or Alert
Initiate the alarm or alert by:

- Calling out for help
- Activating a manual pull station
- Phoning the fire department

Fire Safety: Response

When you hear the fire alarm in your facility, you may not know if it is a drill or a true fire. Treat the alarm as if it were a true emergency.

Respond using the **RACE** protocol:

- **R: Remove or Rescue**
- **A: Alarm or Alert**
- **C: Confine or Contain**
- **E: Extinguish or Evacuate**

Click on each item for a brief review.

C: **Confine or Contain**

Confine or contain the fire by closing the door to the room where the fire started.

Fire Safety: Response

When you hear the fire alarm in your facility, you may not know if it is a drill or a true fire. Treat the alarm as if it were a true emergency.

Respond using the **RACE** protocol:

- **R: Remove or Rescue**
- **A: Alarm or Alert**
- **C: Confine or Contain**
- **E: Extinguish or Evacuate**

Click on each item for a brief review.

E: Extinguish or Evacuate

If the fire is small enough to put out with a single portable extinguisher, attempt to **extinguish.** Use the PASS protocol:

- P: Pull the pin
- A: Aim the nozzle
- S: Squeeze the trigger
- S: Sweep back and forth across the base of the fire

Otherwise, prepare to **evacuate** patients to an unaffected smoke/fire compartment.

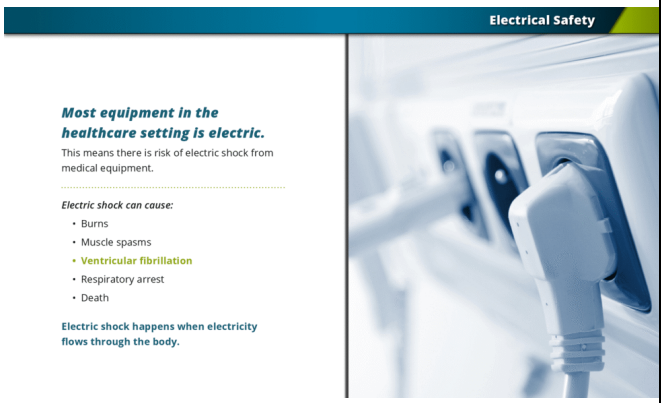
Electrical Safety

Most equipment in the healthcare setting is electric.

This means there is risk of electric shock from medical equipment.

Electric shock can cause:

- Burns
- Muscle spasms
- Ventricular fibrillation [glossary]
- Respiratory arrest
- Death



Electrical Safety: Preventing Accidents

To help prevent electrical accidents in your facility:

- **Remove and report electrical hazards**
- **Use electrical equipment properly**
- **Maintain, test, and inspect equipment regularly**

Click on each of these for a brief review of key points.

Remove and report hazards

Remove electrical equipment from service if it:

- Malfunctions
- Shows signs of damage
- Shows signs of unusual heating
- Produces a burning smell during operation
- Shocks staff or patients

Electrical Safety: Preventing Accidents

To help prevent electrical accidents in your facility:

- **Remove and report electrical hazards**
- **Use electrical equipment properly**
- **Maintain, test, and inspect equipment regularly**

Click on each of these for a brief review of key points.

Use equipment safely

- Learn proper equipment operation before use.
- Do not use damaged equipment.
- Do not use equipment on which liquid has been spilled.
- Do not operate electrical equipment with wet hands or when standing in water.
- Do not stack anything on or behind electrical equipment.
- Turn equipment off before plugging in or unplugging.

Electrical Safety: Preventing Accidents

To help prevent electrical accidents in your facility:

- **Remove and report electrical hazards**
- **Use electrical equipment properly**
- **Maintain, test, and inspect equipment regularly**

Click on each of these for a brief review of key points.

Maintain, test, and inspect

All medical equipment should be inspected and tested on a regular schedule.

Electrical Safety: Hazards

Other best practices for preventing electrical accidents in your facility are:

- **Use power cords and outlets properly**
- **Use circuits safely**
- **Protect patients from electrical shock**

Click on each of these for a brief review of key points.

Use cords and outlets properly

- Do not use outlets or cords with exposed wiring.
- Report damaged outlets or cords.
- A hot outlet can be an indication of unsafe wiring. Unplug cords from the outlet. Report the hazard.
- Do not bend, stretch, or kink power cords excessively.
- Do not jerk cords from outlets. Pull on the plug.
- Do not staple, tack, or nail power cords to walls or floors. Use tape, if necessary.
- Do not rest equipment on power cords.
- Use only power cords with three-prong plugs. Never use adapters, two-prong plugs, or broken three-prong plugs.

Other best practices for preventing electrical accidents in your facility are:

- **Use power cords and outlets properly**
- **Use circuits safely**
- **Protect patients from electrical shock**

Click on each of these for a brief review of key points.

Use circuits safely

- Do not overload circuits.
- Label each circuit breaker clearly.
- Breaker boxes should be accessible at all times.

Electrical Safety: Hazards

Other best practices for preventing electrical accidents in your facility are:

- **Use power cords and outlets properly**
- **Use circuits safely**
- **Protect patients from electrical shock**

Click on each of these for a brief review of key points.

Protect patients

- Place electrical equipment at a distance from patients.
- Maintain patient areas, keeping floors dry at all times.
- Do not touch patients and electrical equipment at the same time.

Radiation Safety

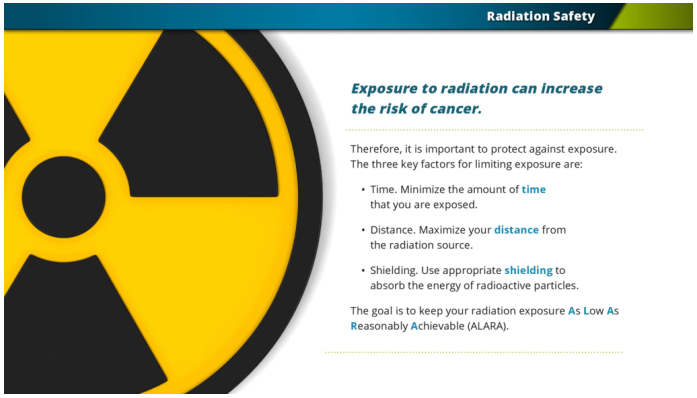
Exposure to radiation can increase the risk of cancer.

Therefore, it is important to protect against exposure.

The three key factors for limiting exposure are:

- Time. Minimize the amount of **time** that you are exposed.
- Distance. Maximize your **distance** from the radiation source.
- Shielding. Use appropriate **shielding** to absorb the energy of radioactive particles.

The goal is to keep your radiation exposure **A**s **L**ow **A**s **R**easonably **A**chievable (ALARA).

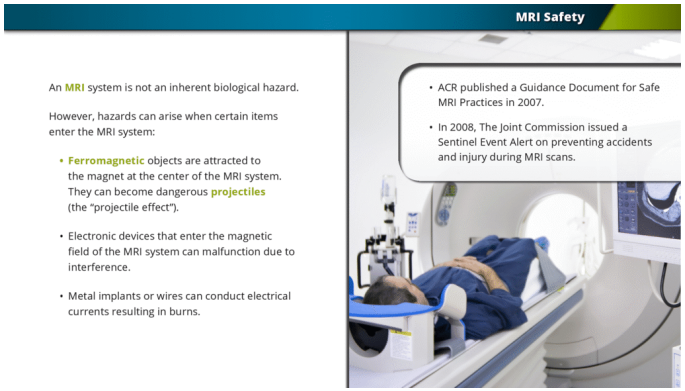


MRI Safety

An MRI [glossary] system is not an inherent biological hazard.

However, hazards can arise when certain items enter the MRI system:

- Ferromagnetic [glossary] objects are attracted to the magnet at the center of the MRI system. They can become dangerous projectiles [glossary] (the “projectile effect”).
- Electronic devices that enter the magnetic field of the MRI system can malfunction due to interference.
- Metal implants or wires can conduct electrical currents resulting in burns.

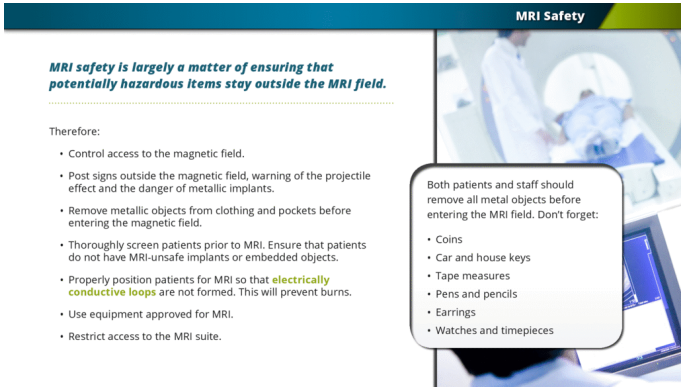


MRI Safety

MRI safety is largely a matter of ensuring that potentially hazardous items stay outside the MRI field.

Therefore:

- Control access to the magnetic field.
- Post signs outside the magnetic field, warning of the projectile effect and the danger of metallic implants.
- Remove metallic objects from clothing and pockets before entering the magnetic field.
- Thoroughly screen patients prior to MRI. Ensure that patients do not have MRI-unsafe implants or embedded objects.
- Properly position patients for MRI so that electrically conductive loops [glossary] are not formed. This will prevent burns.
- Use equipment approved for MRI.
- Restrict access to the MRI suite.



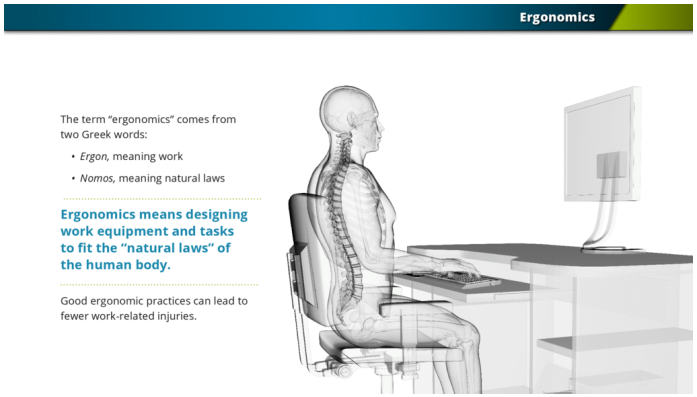
Ergonomics

The term “ergonomics” comes from two Greek words:

- *Ergon*, meaning work
- *Nomos*, meaning natural laws

Ergonomics means designing work equipment and tasks to fit the “natural laws” of the human body.

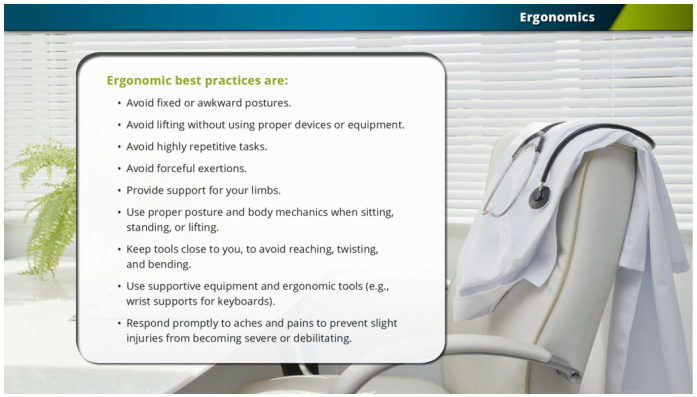
Good ergonomic practices can lead to fewer work-related injuries.



Ergonomics

Ergonomic best practices are:

- Avoid fixed or awkward postures.
- Avoid lifting without using proper devices or equipment.
- Avoid highly repetitive tasks.
- Avoid forceful exertions.
- Provide support for your limbs.
- Use proper posture and body mechanics when sitting, standing, or lifting.
- Keep tools close to you, to avoid reaching, twisting, and bending.
- Use supportive equipment and ergonomic tools (e.g., wrist supports for keyboards).
- Respond promptly to aches and pains to prevent slight injuries from becoming severe or debilitating.



Back Safety

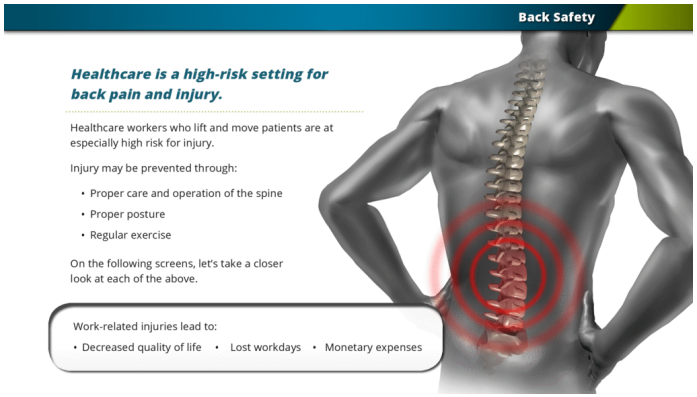
Healthcare is a high-risk setting for back pain and injury.

Healthcare workers who lift and move patients are at especially high risk for injury.

Injury may be prevented through:

- Proper care and operation of the spine
- Proper posture
- Regular exercise

On the following screens, let's take a closer look at each of the above.



Back Safety: Proper Care and Operation of the Spine	
Take proper care of the spine while: • **Sleeping** • **Standing** • **Sitting** • **Lifting a static load vertically** • **Lifting or transferring a patient** Click on each item for a brief review of key points.	**Sleeping** • Sleeping on the back is best for back health. • Sleeping on the side is next best. • Sleeping on the stomach is least healthy for the back.
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Back Safety: Proper Care and Operation of the Spine

Take proper care of the spine while:

- **Sleeping**
- **Standing**
- **Sitting**
- **Lifting a static load vertically**
- **Lifting or transferring a patient**

Click on each item for a brief review of key points.

Standing

- Wear good, comfortable shoes.
- Stand up straight.
- Keep the knees flexed.
- Use a footrest, alternating feet every few minutes if you must stand for long periods of time.

Back Safety: Proper Care and Operation of the Spine

Take proper care of the spine while:

- **Sleeping**
- **Standing**
- **Sitting**
- **Lifting a static load vertically**
- **Lifting or transferring a patient**

Click on each item for a brief review of key points.

Sitting

- Form 90-degree angles at the knees and the hips.
- When the hands are on a desk or keyboard, also form 90-degree angles at the elbows. The wrists should be kept straight.

Back Safety: Proper Care and Operation of the Spine

Take proper care of the spine while:

- **Sleeping**
- **Standing**
- **Sitting**
- **Lifting a static load vertically**
- **Lifting or transferring a patient**

Click on each item for a brief review of key points.

Lifting a static load vertically

- Bend at the hips and knees.
- Keep the head up.
- Maintain the three natural curves of the spine.
- Hold the load close to the body.
- Lift with the muscles of the legs.

Back Safety: Proper Care and Operation of the Spine

Take proper care of the spine while:

- **Sleeping**
- **Standing**
- **Sitting**
- **Lifting a static load vertically**
- **Lifting or transferring a patient**

Click on each item for a brief review of key points.

Lifting or transferring a patient

- Avoid manual lifting.
- Use motorized lifts or other assistive devices.

Back Safety: Proper Posture

To stand with proper posture, imagine a cord dropped through the center of your head to your feet.

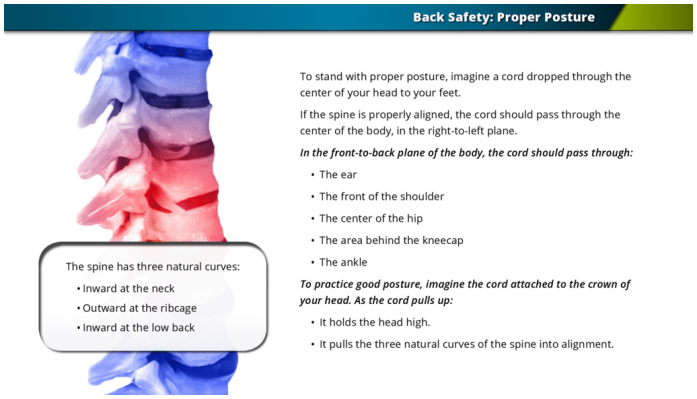
If the spine is properly aligned, the cord should pass through the center of the body, in the right-to-left plane.

In the front-to-back plane of the body, the cord should pass through:

- The ear
- The front of the shoulder
- The center of the hip
- The area behind the kneecap
- The ankle

To practice good posture, imagine the cord attached to the crown of your head. As the cord pulls up:

- It holds the head high.
- It pulls the three natural curves of the spine into alignment.



Back Safety: Regular Exercise	
Regular exercise can help prevent back injury. Exercise should include: • **Aerobic exercise** • **Stretching exercise** • **Strengthening exercise** Click on each for a brief review of key points. Consult your physical therapist or physician to find appropriate exercises for your back.	**Aerobic exercise** Do aerobic exercise [glossary] at least three times a week. This contributes to overall fitness and increases blood flow to the spine.
	Slide 34 of 94

Back Safety: Regular Exercise

Regular exercise can help prevent back injury.

Exercise should include:

- **Aerobic exercise**
- **Stretching exercise**
- **Strengthening exercise**

Click on each for a brief review of key points.

Consult your physical therapist or physician to find appropriate exercises for your back.

Stretching exercises

Stretches are gradual, gentle exercises that lengthen important muscles, increasing their ability to be put through the range of motion for which they are designed. Stretch seven days a week.

Back Safety: Regular Exercise

Regular exercise can help prevent back injury.

Exercise should include:

- **Aerobic exercise**
- **Stretching exercise**
- **Strengthening exercise**

Click on each for a brief review of key points.

Consult your physical therapist or physician to find appropriate exercises for your back.

Strengthening exercises

Strengthening exercises help build muscle mass and definition by forcing the muscles to work against weight or resistance. Do strengthening exercises four to five days a week.

Lifting and Transferring Patients

Healthcare staff who lift and transfer patients are repeatedly exposed to the three major risk factors for injury during physical tasks:

- **Awkward posture**
- **Force**
- **Repetition**

Click on each factor for a brief review of key points.

Awkward posture

Manual patient handling often involves awkward postures. For example, bending and reaching while lifting or lowering creates an awkward posture.

Lifting and Transferring Patients

Healthcare staff who lift and transfer patients are repeatedly exposed to the three major risk factors for injury during physical tasks:

- **Awkward posture**
- **Force**
- **Repetition**

Click on each factor for a brief review of key points.

Force

Force refers to how hard the muscles have to work. A lot of force is required to lift patients who typically weigh 100 pounds or more.

Lifting and Transferring Patients

Healthcare staff who lift and transfer patients are repeatedly exposed to the three major risk factors for injury during physical tasks:

- **Awkward posture**
- **Force**
- **Repetition**

Click on each factor for a brief review of key points.

Repetition

This risk factor refers to performing the same motion or series of motions over and over again. Nurses and aides might perform dozens of lifts and transfers in a single shift. They might perform thousands of lifts over a lifetime of nursing.

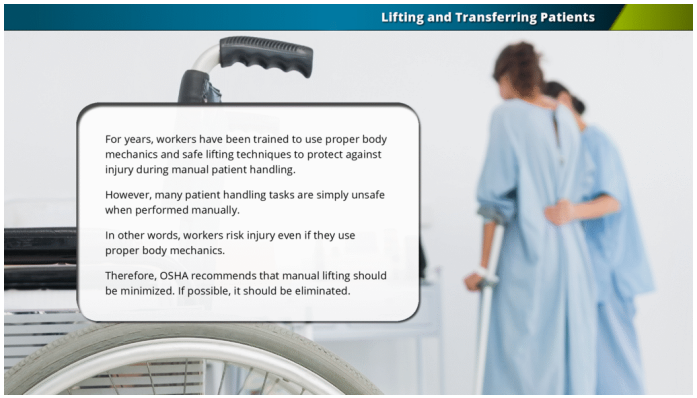
Lifting and Transferring Patients

For years, workers have been trained to use proper body mechanics and safe lifting techniques to protect against injury during manual patient handling.

However, many patient handling tasks are simply unsafe when performed manually.

In other words, workers risk injury even if they use proper body mechanics.

Therefore, OSHA recommends that manual lifting should be minimized. If possible, it should be eliminated.



Lifting and Transferring Patients

To minimize or eliminate manual lifting, use devices to help with patient lifts and transfers.

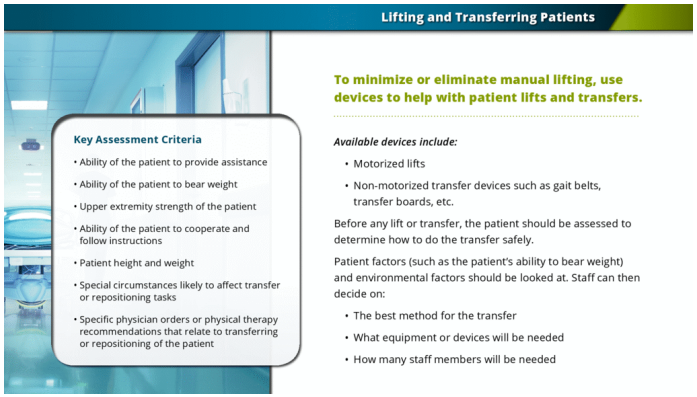
Available devices include:

- Motorized lifts
- Non-motorized transfer devices such as gait belts, transfer boards, etc.

Before any lift or transfer, the patient should be assessed to determine how to do the transfer safely.

Patient factors (such as the patient's ability to bear weight) and environmental factors should be looked at. Staff can then decide on:

- The best method for the transfer
- What equipment or devices will be needed
- How many staff members will be needed

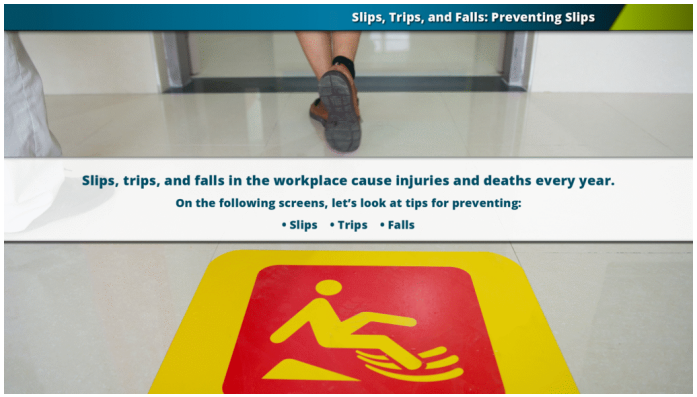


Slips, Trips, and Falls: Prevention

Slips, trips, and falls in the workplace cause injuries and deaths every year.

On the following screens, let's look at tips for preventing:

- Slips
- Trips
- Falls



Slips, Trips, and Falls: Preventing Slips

To help prevent slips:

- Keep floors clean and dry.
- Increase the friction of floors with abrasive coatings, non-skid strips, or rubber mats.
- Secure rugs with skid-resistant backing.
- Choose slip-resistant shoes with:
  - Soft rubber soles
  - A large amount of surface area in contact with the floor (i.e., no high heels)
  - Patterned soles that increase friction
- Post safety signs around slip hazards (icy sidewalks, wet floors, etc.).

Slips, Trips, and Falls: Preventing Trips

To help prevent trips:

- Keep floors clear and uncluttered
- Repair uneven flooring, or post safety signs
- Use proper lighting (not too bright and not too dim)

Slips, Trips, and Falls: Preventing Falls

Most falls in the workplace are foot-level falls. In a foot-level fall, a person slips or trips on a walking or standing surface. This results in a short fall.

Falls-to-below carry a higher risk of injury.

Danger zones for falls-to-below are:

- **Stairs**
- **Ladders**

Click on each for strategies to prevent falls.

Stairs

- Keep staircases clean and well lit.
- Staircases should have sturdy handrails on both sides.
- Take one step at a time.
- Maintain your center of balance when stepping.

Slips, Trips, and Falls: Preventing Falls

Most falls in the workplace are foot-level falls. In a foot-level fall, a person slips or trips on a walking or standing surface. This results in a short fall.

Falls-to-below carry a higher risk of injury.

Danger zones for falls-to-below are:

- **Stairs**
- **Ladders**

Click on each for strategies to prevent falls.

Ladders

- Use a ladder of the height you need.
- Lock the spreader into position before climbing the ladder.
- Climb straight up and do not lean to either side.
- Hold onto the side rails with both hands while climbing up or down.

Slips, Trips, and Falls: Minimizing Risk

When conditions are hazardous (icy sidewalks, wet floors), avoid slipping and falling by walking like a duck:

- Keep your feet flat and slightly spread apart.
- Point your toes slightly outward.
- Take slow, short steps.
- Keep your center of balance under you.
- Make wide turns at corners.
- Keep your arms at your sides.
    - This gives additional balance.
    - It keeps your arms available for support if you fall.

Latex Allergy: Screening and Diagnosis

Latex allergy results from hypersensitivity to specific proteins or chemicals in the latex product.

Latex allergy is becoming more and more common. Most reactions to latex are mild, but some can be life-threatening.

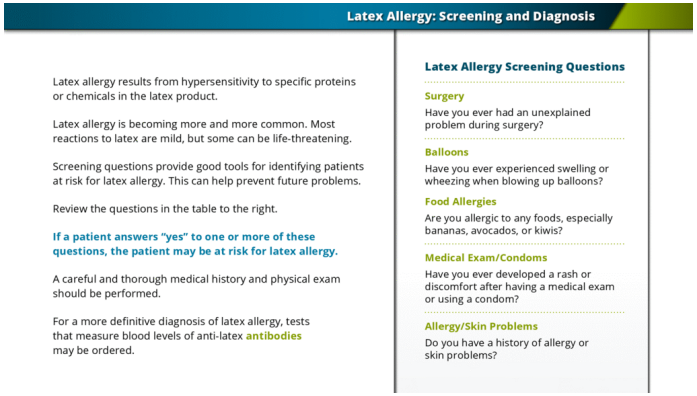
Screening questions provide good tools for identifying patients at risk for latex allergy. This can help prevent future problems.

Review the questions in the table to the right.

If a patient answers “yes” to one or more of these questions, the patient may be at risk for latex allergy.

A careful and thorough medical history and physical exam should be performed.

For a more definitive diagnosis of latex allergy, tests that measure blood levels of anti-latex antibodies [glossary] may be ordered.



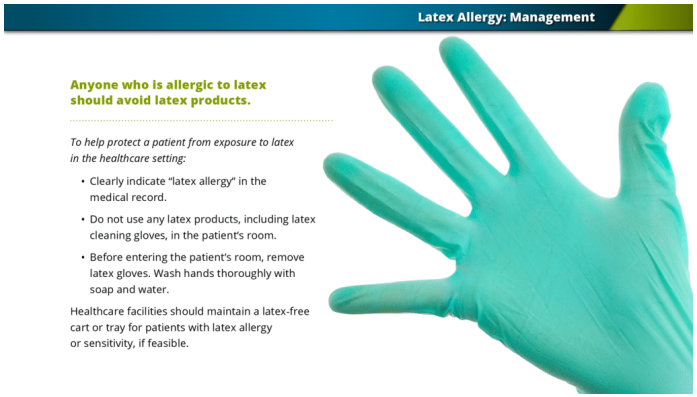
Latex Allergy: Management

Anyone who is allergic to latex should avoid latex products.

To help protect a patient from exposure to latex in the healthcare setting:

- Clearly indicate “latex allergy” in the medical record.
- Do not use any latex products, including latex cleaning gloves, in the patient’s room.
- Before entering the patient’s room, remove latex gloves. Wash hands thoroughly with soap and water.

Healthcare facilities should maintain a latex-free cart or tray for patients with latex allergy or sensitivity, if feasible.



Latex Allergy: Management

Healthcare workers are at elevated risk for latex allergy.

If you are allergic to latex:

- Avoid all contact with latex
- Wear a medical alert bracelet or necklace.
- Inform your employer.
- Encourage your facility to provide as many latex-free products as possible.
- Use silk or plastic tape instead of adhesive tape.
- Use non-latex gloves only.

Under its Hazard Communication Standard, OSHA requires all employers to develop written hazard communication programs.

To protect workers from exposure to hazardous chemicals, the following groups of people have hazard communication duties:

- **Manufacturers**
- **Employers**
- **Employees**

Click on each for a review of key duties.

Note:
GHS is the Globally Harmonized System of Classification and Labeling of Chemicals adopted by the United Nations. OSHA's Hazard Communication Standard is aligned with the GHS.

Manufacturers

Manufacturers of hazardous chemicals must:

- Research, create, and distribute a Safety Data Sheet (SDS), which lists the specific hazards of the chemical
- Label, in English, all containers of hazardous materials with:
  - Product identifier
  - Signal word
  - Hazard statement(s)
  - Precautionary statement(s)
  - Pictogram(s)
  - Name, address, and telephone number of the manufacturer

Under its Hazard Communication Standard, OSHA requires all employers to develop written hazard communication programs.

To protect workers from exposure to hazardous chemicals, the following groups of people have hazard communication duties:

- **Manufacturers**
- **Employers**
- **Employees**

Click on each for a review of key duties.

Note:
GHS is the Globally Harmonized System of Classification and Labeling of Chemicals adopted by the United Nations. OSHA's Hazard Communication Standard is aligned with the GHS.

Employers

Employers whose employees work with hazardous chemicals must:

- Maintain a file of SDSs for all hazardous chemicals used by workers
- Inspect incoming chemicals to verify proper labeling. If a chemical is transferred to an unlabeled container at the facility, the new container must be labeled appropriately.
- Train employees in the use of hazardous chemicals

Hazard Communication

Under its Hazard Communication Standard, OSHA requires all employers to develop written hazard communication programs.

To protect workers from exposure to hazardous chemicals, the following groups of people have hazard communication duties:

- **Manufacturers**
- **Employers**
- **Employees**

Click on each for a review of key duties.

Note:
GHS is the Globally Harmonized System of Classification and Labeling of Chemicals adopted by the United Nations. OSHA's Hazard Communication Standard is aligned with the GHS.

Employees

Employees who work with hazardous chemicals must:

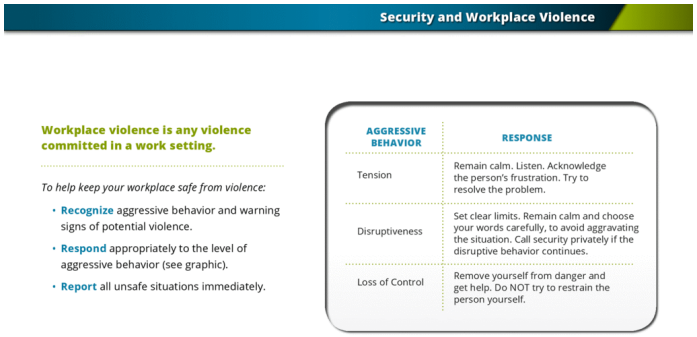
- Know which hazardous chemicals are used in their work area
- Know where SDSs are located on their unit
- Know how to read an SDS
- Read all relevant SDSs before starting a job that may require the use of a hazardous chemical
- Read product labels carefully. Follow all instructions. Heed all warnings.
- Attend all required hazardous chemical training sessions

Security and Workplace Violence

Workplace violence is any violence committed in a work setting.

To help keep your workplace safe from violence:

- **Recognize** aggressive behavior and warning signs of potential violence.
- **Respond** appropriately to the level of aggressive behavior (see graphic).
- **Report** all unsafe situations immediately.



Reporting Incidents

This lesson has focused on guidelines and best practices for ensuring staff and patient safety.

However, mistakes and problems can happen. A breach in safety is referred to as an **incident**.

Common examples of incidents have been mentioned in this lesson:

- Equipment malfunction
- Exposure to radiation
- MRI injury
- Latex allergic reaction
- Back injury
- Slip, trip, or fall
- Exposure to hazardous chemicals
- Workplace violence

All incidents should be reported immediately.

Check with your supervisor if you are not familiar with facility procedures for reporting incidents.

Lesson 3: Emergency Preparedness

Introduction	
Welcome to the lesson on emergency preparedness.	Lesson 3: Emergency Preparedness • Disaster events • Emergency Operations Plans
	Slide 56 of 94

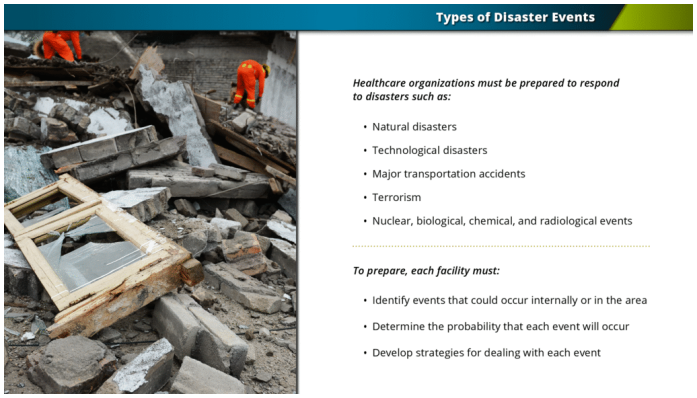
Types of Disaster Events

Healthcare organizations must be prepared to respond to disasters such as:

- Natural disasters
- Technological disasters
- Major transportation accidents
- Terrorism
- Nuclear, biological, chemical, and radiological events

To prepare, each facility must:

- Identify events that could occur internally or in the area
- Determine the probability that each event will occur
- Develop strategies for dealing with each event



Emergency Operations Plans

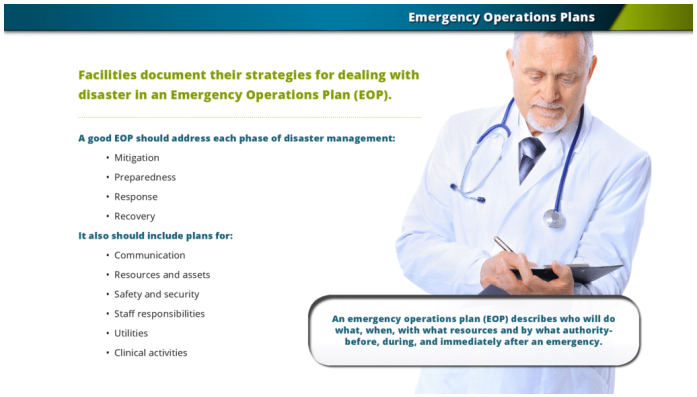
Facilities document their strategies for dealing with disaster in an Emergency Operations Plan (EOP).

A good EOP should address each phase of disaster management:

- Mitigation
- Preparedness
- Response
- Recovery

It also should include plans for:

- Communication
- Resources and assets
- Safety and security
- Staff responsibilities
- Utilities
- Clinical activities



Beyond Emergency Operations Plans

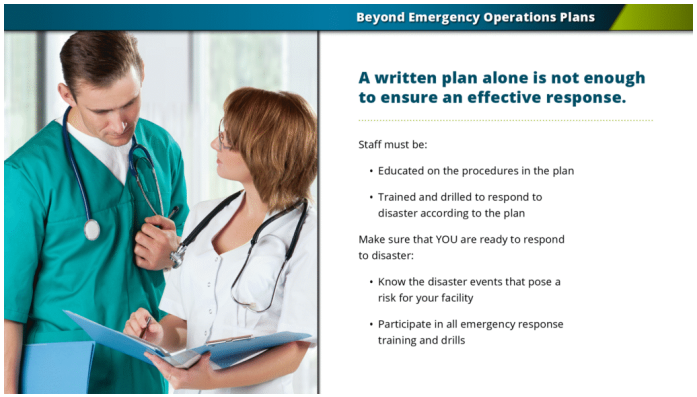
A written plan alone is not enough to ensure an effective response.

Staff must be:

- Educated on the procedures in the plan
- Trained and drilled to respond to disaster according to the plan

Make sure that YOU are ready to respond to disaster:

- Know the disaster events that pose a risk for your facility
- Participate in all emergency response training and drills



Lesson 4: Infection Control

Introduction	
Welcome to the lesson on infection control.	Lesson 4: Infection Control • Healthcare-associated infection • Hand hygiene • Environmental hygiene • Antibiotic use • Bloodborne pathogens • Airborne precautions • Contact precautions • Droplet precautions • Personal protective equipment • Personal responsibility
	Slide 60 of 94

Healthcare-Associated Infection: Impact

Healthcare-associated infection (HAI) is an infection that develops after contact with the healthcare system. It:

- Is not present or incubating at the time healthcare services are delivered
- Presents symptomatically 48 hours or more after admission or provision of care

HAI can be very costly in terms of:

- Patient life and health
- Healthcare dollars

HAI: Cause

HAI may be caused by bacteria, viruses, fungi, or parasites.

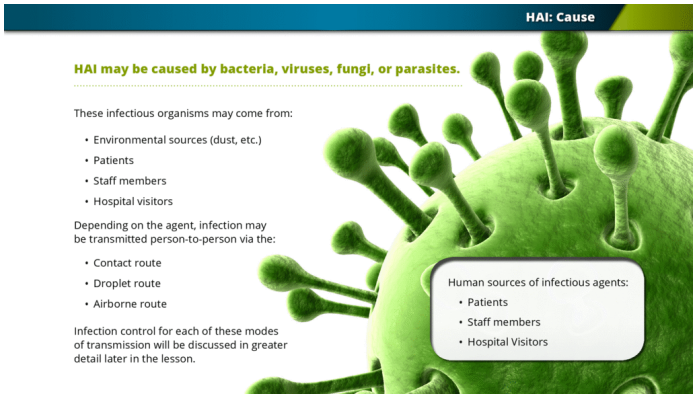
These infectious organisms may come from:

- Environmental sources (dust, etc.)
- Patients
- Staff members
- Hospital visitors

Depending on the agent, infection may be transmitted person-to-person via the:

- Contact route
- Droplet route
- Airborne route

Infection control for each of these modes of transmission will be discussed in greater detail later in the lesson.



HAI: Prevention

Preventing HAI is an important focus of The Joint Commission.

The standards state:

"The activities of infection prevention and control should be practical and involve collaboration between staff. Everyone who works in the organization should have a role and hold each other accountable."

The Joint Commission expects accredited hospitals to implement evidence-based practices to prevent HAI. These practices must focus on:

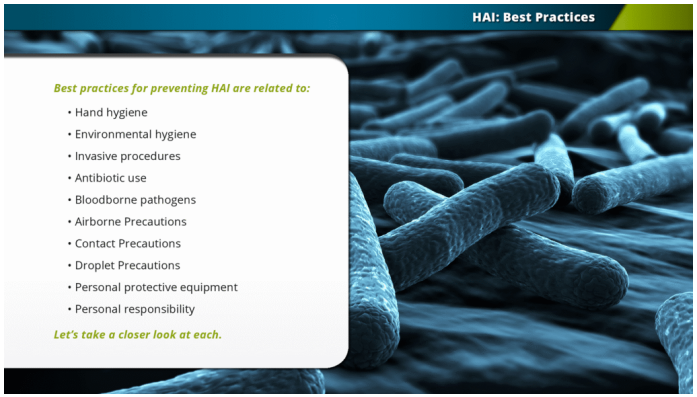
- Central line–associated bloodstream infections
- Infections due to multidrug-resistant organisms
- Surgical site infections
- Catheter-associated urinary tract infections (CAUTI)

HAI: Best Practices

Best practices for preventing HAI are related to:

- Hand hygiene
- Environmental hygiene
- Invasive procedures
- Antibiotic use
- Bloodborne pathogens
- Airborne Precautions
- Contact Precautions
- Droplet Precautions
- Personal protective equipment
- Personal responsibility

Let’s take a closer look at each.



Hand Hygiene: When and What

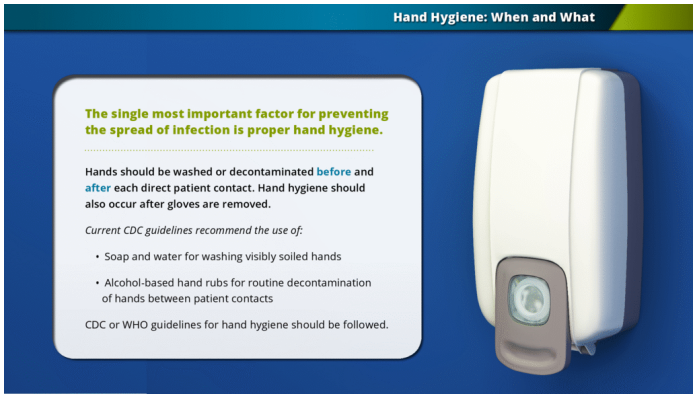
The single most important factor for preventing the spread of infection is proper hand hygiene.

Hands should be washed or decontaminated **before** and **after** each direct patient contact. Hand hygiene should also occur after gloves are removed.

Current CDC guidelines recommend the use of:

- Soap and water for washing visibly soiled hands
- Alcohol-based hand rubs for routine decontamination of hands between patient contacts

CDC or WHO guidelines for hand hygiene should be followed.



Hand Hygiene: How

When washing with soap and water:

- Pre-wet hands with water.
- Use an appropriate amount of soap.
- Rub all surfaces of the hands and wrists for 15 seconds.
- Rinse thoroughly under running water.
- Dry hands with a disposable towel.

When decontaminating hands with an alcohol rub:

- Apply the amount of rub recommended by the manufacturer.
- Rub all surfaces of the hands and wrists until hands are dry.

Environmental Hygiene

Environmental hygiene also can help prevent HAI.

Best practices for environmental hygiene are:

- Maintain a visibly clean environment (no visible dust or soiling).
- Clean, disinfect, or sterilize medical equipment after each use.
- Dispose safely of clinical waste.
- Launder used and infected linens safely and effectively.
- Follow appropriate guidelines for kitchen and food hygiene.
- Maintain an adequate pest-control program.

Invasive Procedures

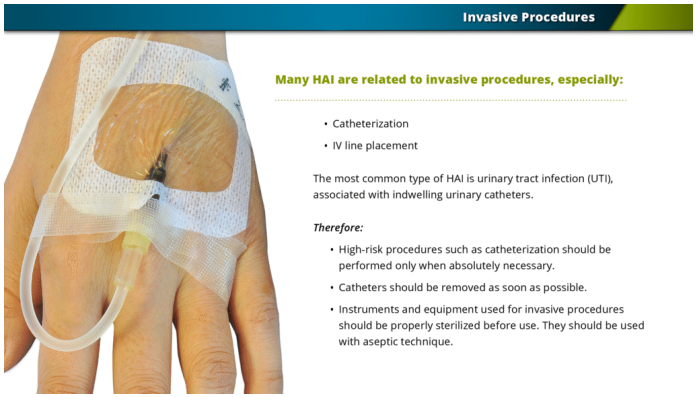
Many HAI are related to invasive procedures, especially:

- Catheterization
- IV line placement

The most common type of HAI is urinary tract infection (UTI), associated with indwelling urinary catheters.

Therefore:

- High-risk procedures such as catheterization should be performed only when absolutely necessary.
- Catheters should be removed as soon as possible.
- Instruments and equipment used for invasive procedures should be properly sterilized before use. They should be used with aseptic technique.



Antibiotic Use: Antibiotic Resistance

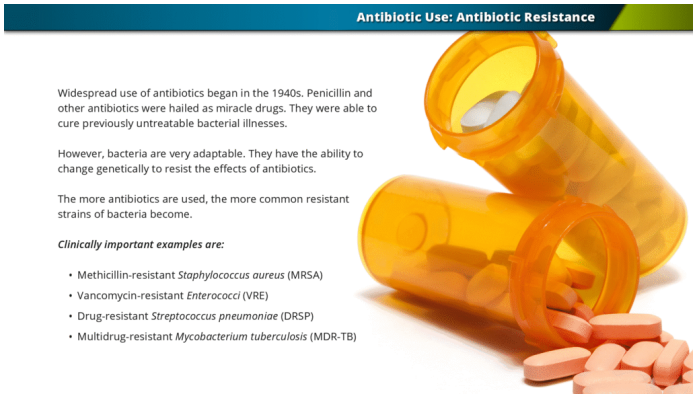
Widespread use of antibiotics began in the 1940s. Penicillin and other antibiotics were hailed as miracle drugs. They were able to cure previously untreatable bacterial illnesses.

However, bacteria are very adaptable. They have the ability to change genetically to resist the effects of antibiotics.

The more antibiotics are used, the more common resistant strains of bacteria become.

Clinically important examples are:

- Methicillin-resistant *Staphylococcus aureus* (MRSA)
- Vancomycin-resistant *Enterococci* (VRE)
- Drug-resistant *Streptococcus pneumoniae* (DRSP)
- Multidrug-resistant *Mycobacterium tuberculosis* (MDR-TB)



Antibiotic Use: Impact of Resistance

Antibiotic resistance is a significant health problem.

It adversely affects:

- **Drug choice**
- **Patient health**
- **The healthcare system**

Click on each for a brief review of key points.

Drug choice

When an infection is resistant to the antibiotic of choice, other antibiotics must be used instead. These second-choice drugs are typically:

- Less effective against the bacteria
- More toxic to the patient
- More expensive

Antibiotic Use: Impact of Resistance

Antibiotic resistance is a significant health problem.

It adversely affects:

- **Drug choice**
- **Patient health**
- **The healthcare system**

Click on each for a brief review of key points.

Patient health

Patients with resistant infections tend to have:

- Lengthier illness
- Higher medical bills
- Greater risk of death

Antibiotic-resistant infections cost at least twice as much as antibiotic-susceptible infections.

Antibiotic Use: Impact of Resistance	
Antibiotic resistance is a significant health problem. It adversely affects: • **Drug choice** • **Patient health** • **The healthcare system** Click on each for a brief review of key points.	**The healthcare system** • Antibiotic-resistant strains contribute significantly to HAI. • More than 70% of all bacteria that cause HAI are found to be resistant to one or more commonly used antibiotics.
	Slide 72 of 94

Antibiotic Use: Prevention of Resistance

Healthcare professionals must take an active role in preventing the spread of antibiotic resistance.

Strategies include:

- **Preventing infection**
- **Diagnosing and treating infection effectively**
- **Using antibiotics prudently**
- **Preventing spread of infection**

Click on each strategy for a brief review of key points.

Prevent infection

One of the best techniques we have to prevent infection is vaccination.

- Patients should be current on appropriate vaccinations.
- Healthcare workers also should receive appropriate vaccinations.

Antibiotic Use: Prevention of Resistance

Healthcare professionals must take an active role in preventing the spread of antibiotic resistance.

Strategies include:

- **Preventing infection**
- **Diagnosing and treating infection effectively**
- **Using antibiotics prudently**
- **Preventing spread of infection**

Click on each strategy for a brief review of key points.

Diagnose and treat infection effectively

- Effective diagnosis means identifying the cause of infection so that the right treatment may be given.
- Effective treatment includes using **specific** antibiotics when antibiotics are necessary. A specific antibiotic is targeted to the identified infectious agent. Use of broad-spectrum antibiotics or multiple antibiotics should be avoided.

Antibiotic Use: Prevention of Resistance

Healthcare professionals must take an active role in preventing the spread of antibiotic resistance.

Strategies include:

- **Preventing infection**
- **Diagnosing and treating infection effectively**
- **Using antibiotics prudently**
- **Preventing spread of infection**

Click on each strategy for a brief review of key points.

Use antibiotics prudently

- An important part of using antibiotics prudently is NOT giving in to patient demands for antibiotics for viral illnesses (colds, flu, etc.).
- Patients must be educated accordingly.

Antibiotic Use: Prevention of Resistance	
Healthcare professionals must take an active role in preventing the spread of antibiotic resistance. Strategies include: • **Preventing infection** • **Diagnosing and treating infection effectively** • **Using antibiotics prudently** • **Preventing spread of infection** Click on each strategy for a brief review of key points.	**Prevent spread of infection** • Remember: The single best method for preventing spread of infection is hand hygiene. This makes proper hand hygiene an important tool in the fight against antibiotic resistance, as well. • Appropriate Isolation Precautions (as discussed later in the lesson) should also be used to prevent spread of infection in the healthcare setting.
	Slide 76 of 94

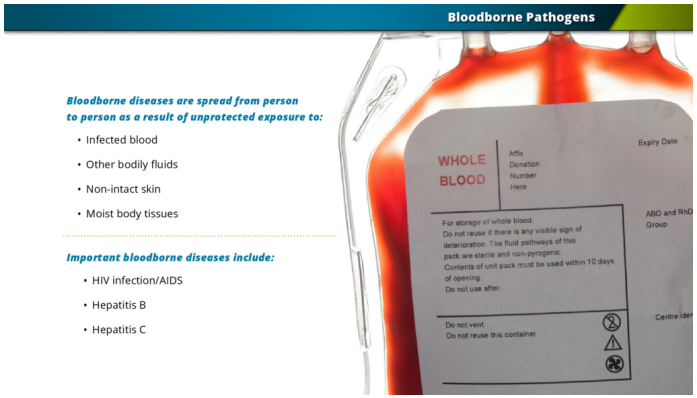
Bloodborne Pathogens

Bloodborne diseases are spread from person to person as a result of unprotected exposure to:

- Infected blood
- Other bodily fluids
- Non-intact skin
- Moist body tissues

Important bloodborne diseases include:

- HIV infection/ AIDS
- Hepatitis B
- Hepatitis C



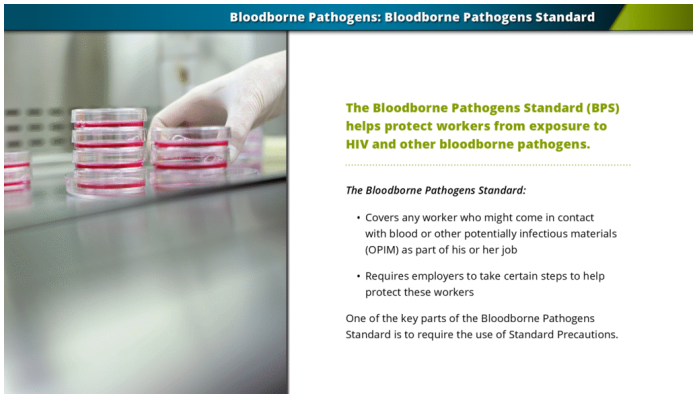
Bloodborne Pathogens: Bloodborne Pathogens Standard

The Bloodborne Pathogens Standard (BPS) helps protect workers from exposure to HIV and other bloodborne pathogens.

The Bloodborne Pathogens Standard:

- Covers any worker who might come in contact with blood or other potentially infectious materials (OPIM) as part of his or her job
- Requires employers to take certain steps to help protect these workers

One of the key parts of the Bloodborne Pathogens Standard is to require the use of Standard Precautions.



Bloodborne Pathogens: Standard Precautions

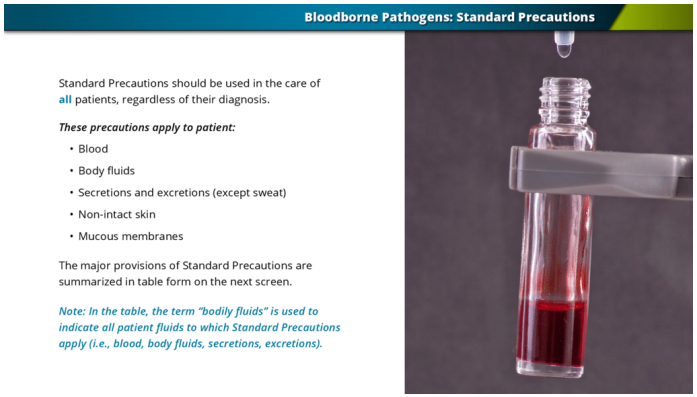
Standard Precautions should be used in the care of **all** patients, regardless of their diagnosis.

These precautions apply to patient:

- Blood
- Body fluids
- Secretions and excretions (except sweat)
- Non-intact skin
- Mucous membranes

The major provisions of Standard Precautions are summarized in table form on the next screen.

Note: In the table, the term “bodily fluids” is used to indicate all patient fluids to which Standard Precautions apply (i.e., blood, body fluids, secretions, excretions).



Bloodborne Pathogens: Standard Precautions

Standard Precautions are to be used in the care of all patients.

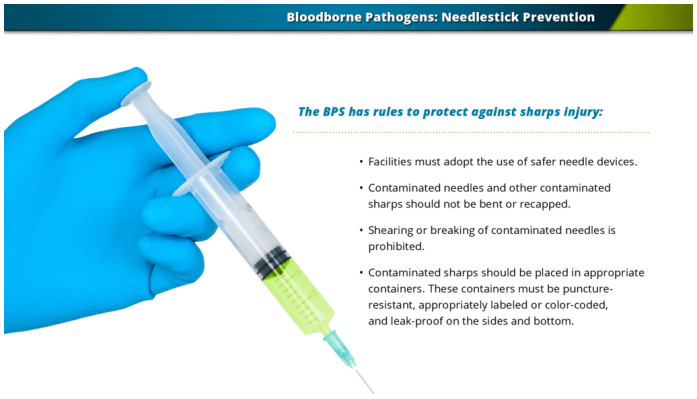
Handwashing	Wash or decontaminate hands: • Before and after each work shift • Before and after physical contact with each patient • Before donning sterile gloves when inserting a central intravascular catheter • Before inserting indwelling urinary catheters, peripheral vascular catheters, or other invasive devices that do not require a surgical procedure • When moving from a contaminated-body site to a clean-body site during patient care • After handling contaminated items such as bedpans, dressings, or urinary drainage bags • After removing gloves • After using the toilet, blowing the nose, covering a sneeze, etc. • Whenever hands become visibly dirty • Before eating, drinking, or handling food
Gloves	• Wear gloves when touching blood, other bodily fluids, or contaminated items. • Put on clean gloves before touching mucous membranes or non-intact skin. • Change gloves between “dirty” and “clean” tasks on the same patient. • Remove gloves promptly after use (before going to another patient). Perform hand hygiene immediately.
Mask, Eye Protection, Face Shield, Gown	• Use personal protective equipment (PPE) as necessary to protect against splashes or sprays of blood or other bodily fluids. • Use masks for catheter insertion or injection into spinal or epidural spaces.
Patient-Care Equipment and Linens	• Equipment and linens soiled with blood or other bodily fluids should be handled in a way that avoids cross-contamination. • Clean and reprocess reusable equipment appropriately before use on another patient. • Discard single-use items appropriately.
Environmental Control	• Environmental surfaces should be cleaned and disinfected on a routine basis.
	Slide 80 of 94

Bloodborne Pathogens	• Use sharps (needles, scalpels, etc.) carefully and appropriately. For example, do not bend or recap needles. • Use safe injection practices. • Take care to prevent accidental sticks.
Patient Placement	• Patients who contaminate the environment should be placed in private rooms.

Bloodborne Pathogens: Needlestick Prevention

The BPS has rules to protect against sharps injury:

- Facilities must adopt the use of safer needle devices.
- Contaminated needles and other contaminated sharps should not be bent or recapped.
- Shearing or breaking of contaminated needles is prohibited.
- Contaminated sharps should be placed in appropriate containers. These containers must be puncture-resistant, appropriately labeled or color-coded, and leak-proof on the sides and bottom.



Airborne Precautions: Background

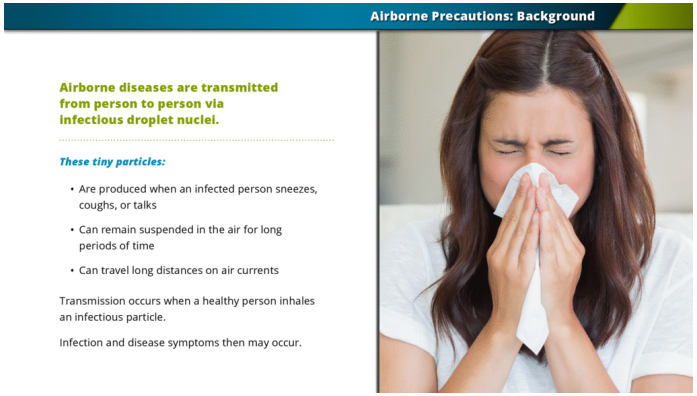
Airborne diseases are transmitted from person to person via infectious droplet nuclei.

These tiny particles:

- Are produced when an infected person sneezes, coughs, or talks
- Can remain suspended in the air for long periods of time
- Can travel long distances on air currents

Transmission occurs when a healthy person inhales an infectious particle.

Infection and disease symptoms then may occur.



Airborne Precautions: Diseases

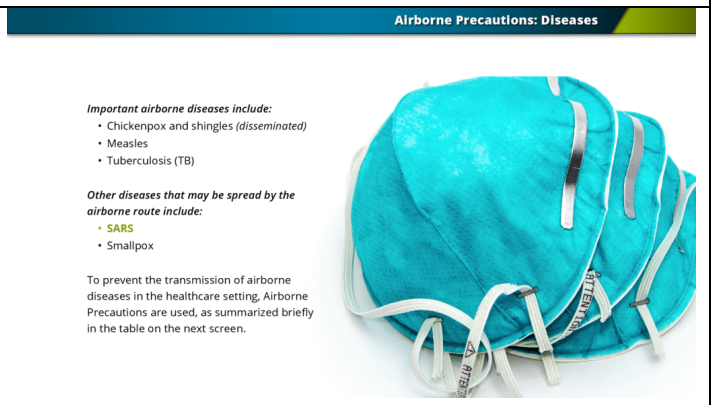
Important airborne diseases include:

- Chickenpox and shingles *(disseminated)*
- Measles
- Tuberculosis (TB)

Other diseases that *may* be spread by the airborne route include:

- SARS [glossary]
- Smallpox

To prevent the transmission of airborne diseases in the healthcare setting, Airborne Precautions are used, as summarized briefly in the table on the next screen.



Airborne Precautions: Summary Table

Airborne Precautions are to be used, along with Standard Precautions, in the care of all patients with a diagnosed or suspected airborne-transmitted disease.

Patient Placement	Patients on Airborne Precautions are isolated in private rooms with special air handling and ventilation systems. If a private room is not available, patients are cohorted [glossary].
Respiratory Protection	Healthcare staff must wear personal respirators whenever they enter an airborne isolation room. N95 respirators are most commonly used. A surgical mask will not protect against airborne transmission.
Patient Transport	Patient transport should be limited as much as possible. During necessary transport, the patient should wear a surgical mask, if possible.

Airborne Precautions: Tuberculosis

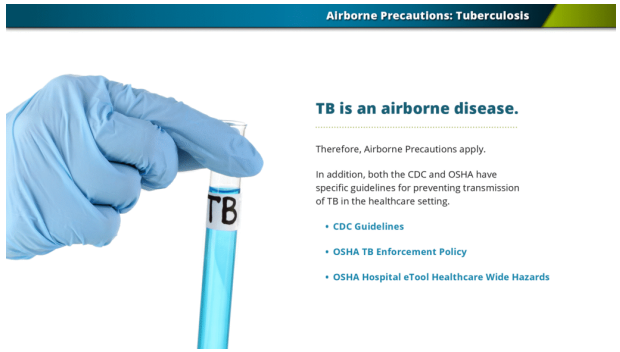
TB is an airborne disease.

Therefore, Airborne Precautions apply.

In addition, both the CDC and OSHA have specific guidelines for preventing transmission of TB in the healthcare setting.

Click on the following links to access more information:

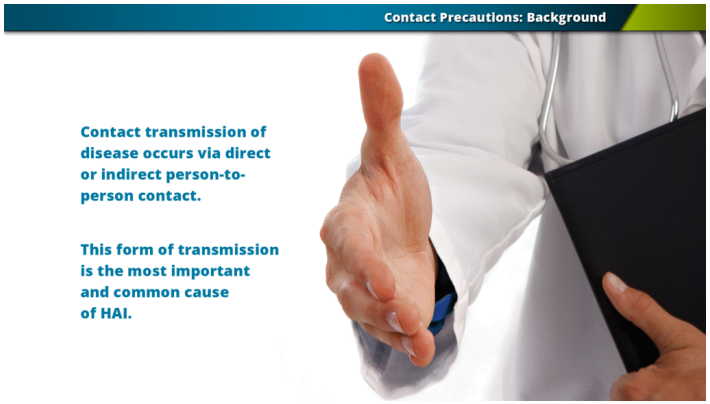
- **CDC Guidelines** (http://www.cdc.gov/tb/publications/guidelines/infectioncontrol.htm)
- **OSHA TB Enforcement Policy** (link to OSHA_TB.pdf)
- **OSHA Hospital eTool Healthcare Wide Hazards** (http://www.osha.gov/SLTC/etools/hospital/hazards/tb/tb.html)



Contact Precautions: Background

Contact transmission of disease occurs via direct or indirect person-to-person contact.

This form of transmission is the most important and common cause of HAI.

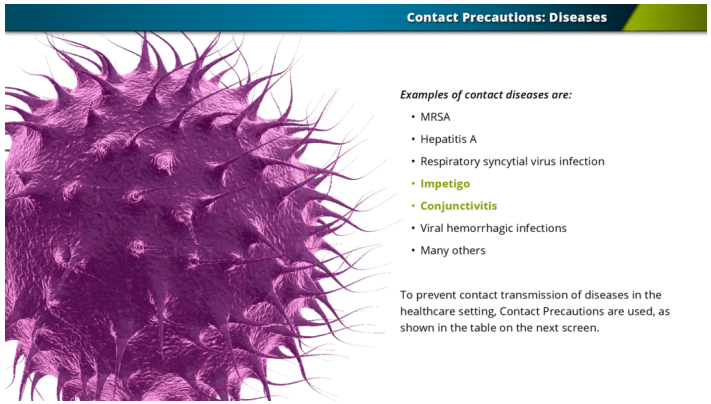


Contact Precautions: Diseases

Examples of contact diseases are:

- MRSA
- Hepatitis A
- Respiratory syncytial virus infection
- Impetigo [glossary]
- Conjunctivitis [glossary]
- Viral hemorrhagic infections
- Many others

To prevent contact transmission of diseases in the healthcare setting, Contact Precautions are used, as shown in the table on the next screen.



Contact Precautions: Summary Table

Contact Precautions are to be used, along with Standard Precautions, in the care of all patients with a diagnosed or suspected contact-transmitted disease.

Patient Placement	Patients on Contact Precautions are isolated in private rooms or cohorted.
PPE	Healthcare staff must don a gown and gloves when entering the room of a patient on Contact Precautions.
Hand Antisepsis	Hands should be decontaminated immediately after removing gloves.
Patient Transport	Patient transport should be limited as much as possible.
Patient-Care Equipment	Non-critical equipment should be dedicated to a single patient or cohort on Contact Precautions. If this is not possible, equipment should be cleaned and disinfected between patients.

Droplet Precautions: Background

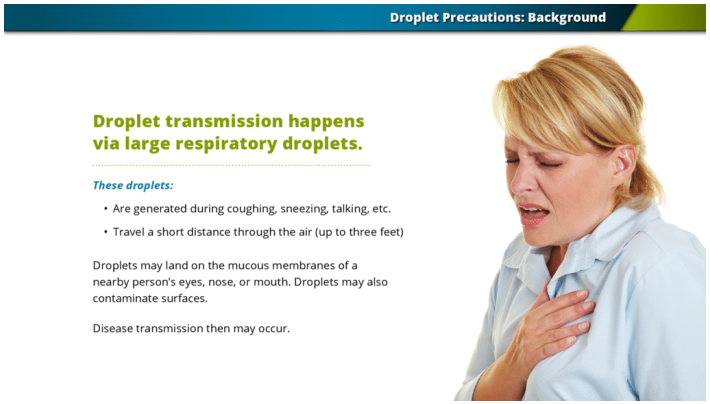
Droplet transmission happens via large respiratory droplets.

These droplets:

- Are generated during coughing, sneezing, talking, etc.
- Travel a short distance through the air (up to three feet)

Droplets may land on the mucous membranes of a nearby person's eyes, nose, or mouth. Droplets may also contaminate surfaces.

Disease transmission then may occur.

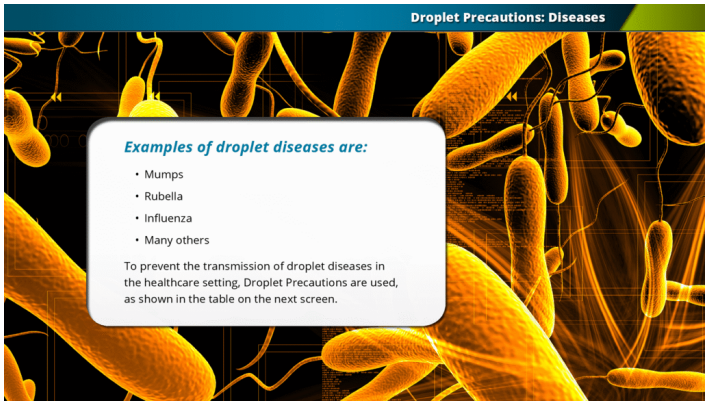


Droplet Precautions: Diseases

Examples of droplet diseases are:

- Mumps
- Rubella
- Influenza
- Many others

To prevent the transmission of droplet diseases in the healthcare setting, Droplet Precautions are used, as shown in the table on the next screen.



Droplet Precautions: Recommendations

Droplet Precautions are to be used, along with Standard Precautions, in the care of all patients with a diagnosed or suspected droplet-transmitted disease.

Patient Placement	Patients on Droplet Precautions should be isolated in private rooms or cohorted. If a private room is not available and cohorting is not possible, patients should be placed at least three feet away from the nearest other patient or visitor.
PPE	Healthcare staff should don gloves and a mask when entering the room of a patient on Droplet Precautions. A gown and eye protection also may be needed.
Hand Antisepsis	Hands should be decontaminated immediately after removing gloves.
Patient Transport	Patient transport should be limited as much as possible.

Personal Protective Equipment

Personal protective equipment (PPE) is an important component of infection control.

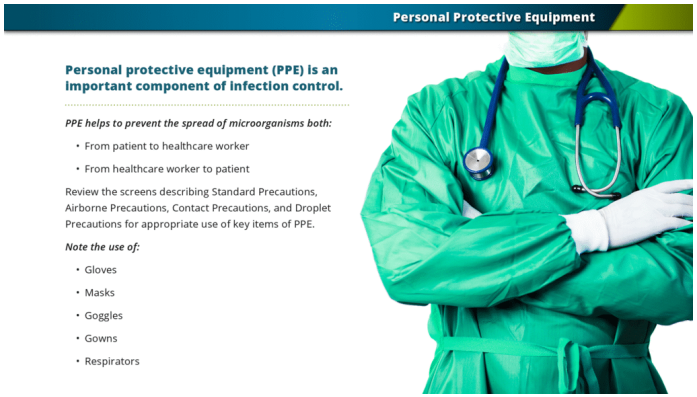
PPE helps to prevent the spread of microorganisms both:

- From patient to healthcare worker
- From healthcare worker to patient

Review the screens describing Standard Precautions, Airborne Precautions, Contact Precautions, and Droplet Precautions for appropriate use of key items of PPE.

Note the use of:

- Gloves
- Masks
- Goggles
- Gowns
- Respirators



Personal Responsibility

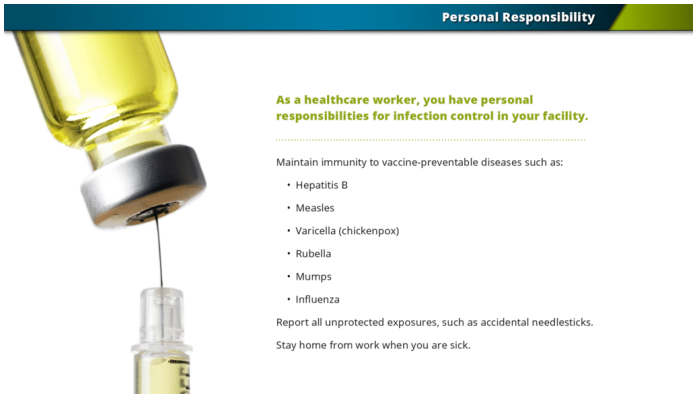
As a healthcare worker, you have personal responsibilities for infection control in your facility.

Maintain immunity to vaccine-preventable diseases such as:

- Hepatitis B
- Measles
- Varicella (chickenpox)
- Rubella
- Mumps
- Influenza

Report all unprotected exposures, such as accidental needlesticks.

Stay home from work when you are sick.



Glossary

Term	Definition
aerobic exercise	continuous activity that requires the use of increased oxygen to maintain the function of the body's cells
antibody	protein produced by immune cells to fight infection
CDC	Centers for Disease Control and Prevention
cohort	to group together patients with the same active infection, but no other infection
electrically conductive loop	complete circuit through which electricity is able to flow
ferromagnetic	able to be attracted by a magnet
HBV	hepatitis B virus
HCV	hepatitis C virus
HIV	human immunodeficiency virus; the cause of AIDS
ventricular fibrillation	an ineffective heart rhythm that if not corrected will lead to cardiac arrest and death
MRI	magnetic resonance imaging
MRSA	methicillin-resistant *Staphylococcus aureus*
OSHA	Occupational Safety and Health Administration
PPE	Personal Protective Equipment
projectile	an object (as a weapon) that is thrown, sent, or cast forward
restraint	any physical or chemical method for restricting a patient's movement, activity, or normal access to his or her own body
seclusion	involuntary confinement of a patient in a room alone
TB	tuberculosis
UTI	urinary tract infection
VRE	vancomycin-resistant enterococci
irritant contact dermatitis	inflammation of the skin due to contact with a substance
SARS	severe acute respiratory syndrome
impetigo	a bacterial skin infection with pus-filled blisters
conjunctivitis	an infection and/or inflammation of the inner lining of the eyelid, commonly called "pink eye"

EXAM

1. The **R** in **RACE** stands for _____.
    a. Run or Reason
    b. Remove or Rescue
    c. Rescue or Reach
    d. React or Run

Correct: B
Rationale: The protocol RACE is an acronym for Remove or Rescue, Alarm or Alert, Confine or Contain, Extinguish or Evacuate

2. To prevent patients from electrical shock or injury, the best practice is to _____.
    a. store manuals behind equipment, not on top of it
    b. store manuals on top of equipment, not behind it
    c. place all equipment within reach of the patient
    d. place all equipment at a distance from the patient

Correct: D
Rationale: Materials should never be stored on or behind electrical equipment. All equipment should be placed at a safe distance from the patient whenever possible.

3. _____ exposure to radiation can increase the risk of cancer.
    a. Rare
    b. Repeated
    c. Shielded
    d. Shaded

Correct: B
Repeated exposure to radiation can increase the risk of radiation. Remember the goal is ALARA; keep your exposure to radiation **A**s **L**ow **A**s **R**easonably **P**ossible.

4. Projectile effects are a hazard in a(n) _____?
    a. operating theater
    b. pediatric unit
    c. emesis station
    d. MRI field

Correct: D

Rationale: Ferromagnetic objects are attracted to the magnet at the center of an MRI system. They can become dangerous projectiles (the "projectile effect").

5. Which practice is the safest way to sit at a desk while typing on the computer?
   a. Keep the knees and hips at 90-degree angles and the wrists straight.
   b. Elevate the knees, keep the hips at a 90-degree angle, and keep the shoulders back
   c. Keep the monitor above the eyes and the keyboard slightly raised
   d. Keep the monitor at eye level and the keyboard slightly raised.

Correct: A
Rationale: Sitting at a desk and typing can stress the back and cause injury. To protect the back, sit with the knees and hips at a 90-degree. Keep the wrists straight. Position equipment so that this posture is the easiest.

6. Lifting or transferring patients is _____.
   a. a risk for back injury; avoid manual lifting
   b. a risk for back injury; lift only when part of a team; learn the technique
   c. not a risk for pediatric patients
   d. not a risk when the health-care worker uses the leg muscles to power the lift

Correct: A
Rationale: Many patient tasks are not safe when done manually, whether individually or as part of a team. Whenever practical, use motorized lifts or other assistive devices, rather than any kind of manual lifting.

7. To keep a strong, healthy back, a best practice is to _____.
   a. sleep on the side or the stomach
   b. avoid using footrests while standing
   c. sleep on the back or the side
   d. keep the dominant foot on a footrest

Correct: C
Rationale: Sleeping on your back is the safest sleeping position; side-sleeping is second best. Standing for long periods is safest when you use a footrest, alternating feet every few minutes.

8. On wet floors, the safest way to walk is to _____.

   a. point toes inward
   b. hug the wall at corners
   c. take quick, short steps
   d. make wide turns at corners

Correct: D
Rationale: When conditions are hazardous, make wide turns at corners to help prevent slipping and falling.

9. Latex allergies are more common in people who _____.
   a. have sensitive skin
   b. have food allergies
   c. do not work in health care
   d. avoid vaccinations

Correct: B
Rationale: People who have food allergies, especially to bananas, avocados, or kiwis, are at risk for a latex allergy. People who have repeated exposures to latex, such as healthcare workers, are also at risk for latex allergies.

10. What is a safety data sheet (SDS)?
   a. A chemical safety checklist
   b. A protocol for handling chemical hazards
   c. A document that lists the specific hazards of a chemical
   d. A label that identifies the chemical in a container

Correct: C
Rationale: A SDS lists the specific hazards of a chemical. If you work with hazardous chemicals, you should know where SDSs are located on your unit and how to read a SDS. You also should read all relevant SDSs before starting a particular job.

11. A fellow employee is frustrated and tense after a difficult morning. Your best reaction is to _____.
   a. remain calm and discreetly call security
   b. leave the room and contact the employee's supervisor
   c. encourage the employee to leave for the afternoon
   d. acknowledge frustration and help resolve the problem

Correct: D
Rationale: People who are not disruptive or out of control are not at risk for committing violence; calling security or a supervisor is extreme. Just acknowledge the frustration and tension, and try to help the person resolve the problem.

12. _____ have hazard communication duties.
   a. Manufacturers, employers, and employees
   b. Supervisors, shippers, and administrators
   c. Manufacturers, management, and OSHA

d. OSHA, employers, and drivers

Correct: A
Rationale: Manufacturers must research, create, and distribute a Safety Data Sheets (SDS) with all substances. Employers must keep a file of SDSs used in the facility, ensure that all containers are properly labeled, and train employees in the use of the hazardous substances. Employees must know which hazardous substances are in their unit, know where the SDSs are located and how to read them, follow all SDS instructions, and attend required training sessions.

13. An Emergency Operations Plan (EOP) includes _____.
    a. staff responsibilities
    b. administrator phone numbers
    c. a SWAT team
    d. state schedules

Correct: A
Rationale: An EOP helps facilities manage disasters. It includes plans for: communication, resources and assets, safety and security, staff security, utilities, and clinical activities.

14. The Joint Commission expects hospitals to implement practices to prevent healthcare-associated infections (HAI). One important practice is _____.
    a. double-gloving to protect healthcare workers
    b. proper hand hygiene
    c. division of responsibility
    d. use of quarantine precautions for contagious patients

Correct: B
Rationale: National Patient Safety Goal 7 includes proper hand hygiene.

15. The CDC recommends that people _____ when their hands are visibly soiled.
    a. rub their hands with an alcohol-based rub
    b. wash their hands with soap and water
    c. wear gloves
    d. both B and C

Correct: B
Rationale: The CDC recommends washing hands with soap and water when the hands are visibly soiled. An alcohol-based hand rub is recommended for routine decontamination of hands between patient contacts when the hands are not visibly soiled.

16. The most common type of healthcare-associated infection (HAI) is a/an _____.
    a. STD from a needle stick
    b. respiratory infection from uncovered coughs
    c. UTI from a catheter
    d. fungal infection from damp walls

Correct: C
Rationale: The most common type of HAI is urinary tract infection (UTI), associated with indwelling urinary catheters.

17. What is a good strategy for helping to prevent the spread of antibiotic resistance?
    a. Give antibiotics for colds and flu.
    b. Use broad-spectrum antibiotics.
    c. Prevent infection through vaccination.
    d. All of these

Correct answer: C
Rationale: To help prevent the spread of antibiotic resistance, prevent infection. Overuse of antibiotics (such as for viral infections) leads to more resistance. One of the best techniques we have to prevent infection is vaccination.

18. _____ protect healthcare workers from exposure to bloodborne pathogens.
    a. Gloves and gowns
    b. Standard Precautions
    c. Vaccinations
    d. Isolation units

Correct: B
Rationale: Standard Precautions should be used in the care of all patients, to protect against exposure to bodily fluids.

19. Which of the following is a part of Contact Precautions?
    a. Patients are isolated in private rooms or cohorted.
    b. Healthcare workers rotate care of infected patients.
    c. HAZMAT teams remain on call.
    d. Healthcare staff must wear personal respirators.

Correct: A
Rationale: Patients on Contact Precautions should be isolated in private rooms or cohorted.