

Introduction

This course is designed for general audiences. The goal of this course is to provide information that helps increase employee awareness and knowledge of various emergency situations to promote effective response practices.

Course Objectives

By the time you complete this course, you should be able to:

- List types of workplace emergencies
- Define what an Emergency Action Plan is
- Identify responses to workplace emergencies
- Identify specific roles in workplace emergencies
- Describe emergency reporting to appropriate authorities

Overview of Emergency Preparedness

Overview of Emergency Preparedness

OSHA Standards

The General Duty Clause of the Occupational Safety and Health Act of 1970, Section 5(a)(1), requires that employers "furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees." Section 5(a)(2) requires that employers "comply with occupational safety and health standards promulgated under this Act".

Emergency preparedness is part of compliance with the General Duty Clause.

Definitions

Click each word for its definition.

Emergency

"A workplace emergency is an unforeseen situation that threatens your employees, customers, or the public; disrupts or shuts down your operations; or causes physical or environmental damage."¹

Preparedness

"Preparedness is defined by DHS/FEMA as "a continuous cycle of planning, organizing, training, equipping, exercising, evaluating, and taking corrective action in an effort to ensure effective coordination during incident response." ²

Conclusion

Each organization has the duty to prepare for workplace emergencies which are reasonably foreseeable. For example, if you are employed in a state in the Midwest, you would not need to make emergency preparations for a hurricane, if you live in Southern California it would not be necessary to make preparations for a blizzard. On the other hand, twenty years ago most organizations did not consider the possibility of a terrorist attack, but this is a threat that should be planned for in every organization now.

¹ OSHA "How to Plan for Workplace Emergencies and Evacuations"

² DHS Plan and Prepare for Disasters _ Homeland Security

Workplace Emergencies

Each work environment has its defined set of foreseeable emergencies based on location and type of activities. A substance misuse recovery center located in a one story building in Florida and a hospital psychiatric unit on the tenth floor of a Chicago hospital have some emergencies in common, but other emergency situations are different.

In this course we look at a number of different workplace emergency situations and possible responses including:

- Natural disasters including floods, hurricanes, tornadoes, blizzards, and earthquakes,
- Fires,
- Explosions,
- Hazardous substances such as toxic gas releases, chemical spills, and radiological accidents,
- Workplace violence,
- Civil disturbances, and terrorism.

You should refer to your facility Emergency Response Plan for specific actions you should take. This course gives an overview of emergency responses.

Before an Emergency

Employers are required to "furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees."¹

Each employee should notify the employer if they see a potential hazard. Potential hazards include hot surfaces, broken equipment, slippery floors, chemical or biological hazards which could affect and employee, ergonomic issues, stress, and even violence. If you feel a hazard exists, notify your supervisor or the appropriate department within your organization.

It is also the responsibility of employees to be aware of identified hazards and the processes or procedures which have been developed by the organization to reduce your risk of exposure. For example, signage, personal protective equipment, and workflows are controls the employer has set to reduce your risk. If you ignore processes or procedures you may be putting yourself at risk.

Finally, your employer has the responsibility of creating an Emergency Action Plan and for notifying employees of their responsibilities under the plan, either as a regular employee or as an emergency responder. As an employee, you should understand your roles, responsibilities, and what the organization plan is for foreseeable emergencies.

¹OSHA General Duty Clause

Personal Disaster Kit

The American Red Cross recommends that employees prepare a Personal Workplace Disaster Kit in the event you are confined to your workplace following a disaster. Click to view a copy of the Personal Workplace Disaster Supplies Kit. A .pdf version is under the Resources tab of this course.

Activity

The portion of the Occupational Safety and Health Act that requires employers to “furnish to each of his employees employment and a place of employment which are free from recognized hazards...” is the

General Duty Clause

General Responsibilities Requirement

Safe Workers Clause

Safety and Health Administration Requirement

Activity

An unforeseen situation that threatens your employees, customers, or the public; disrupts or shuts down your operations; or causes physical or environmental damage is the definition of:

Business interruption

Disaster

Emergency preparedness

Workplace emergency

Activity

Which of these could be classified as a workplace emergency? (Select all that apply)

Civil disturbances and terrorism

Explosions

Fires

Hazardous substances

Natural disasters

Workplace violence

Emergency Action Plan

Emergency Action Plan

OSHA Definition EAP

Organizations with ten or more employees must have an emergency action plan (EAP). “An emergency action plan covers designated actions employers and employees must take to ensure employee safety from fire and other emergencies.”¹

“The elements of the plan must include, but are not limited to:

- Means of reporting fires and other emergencies
- Evacuation procedures and emergency escape route assignments
- Procedures to be followed by employees who remain to operate critical plant operations before they evacuate
- Procedures to account for all employees after an emergency evacuation has been completed
- Rescue and medical duties for those employees who are to perform them
- Names or job titles of persons who can be contacted for further information or explanation of duties under the plan”²

Each employee should understand the emergency action plan and their responsibilities. If you do not understand the plan, you should ask your supervisor, human resources, or emergency response coordinator.

¹ OSHA “How to Plan for Workplace Emergencies and Evacuations”

² Evacuation Plans and Procedures eTool _ OSHA's Expert Systems - Create Your Own Emergency Action Plan (EAP)

Reporting

Organizations may have a facility specific number to call for emergencies. This number should be posted near each phone in the facility. Most jurisdictions in the United States use 9-1-1 as the number for emergencies. Please keep in mind, cell phones may not reach emergency contacts when using 9-1-1 in all jurisdictions. You should know your local emergency contact numbers for cell phones, VOIP¹, and traditional phone lines.

¹ VOIP is Voice over Internet Protocol. ¹ Many organizations use VOIP rather than traditional phone lines.

Roles

In addition to traditional roles within an organization, employees may be trained in specific emergency response roles. Your organization may use different designations, but the duties will be similar. Click each role to learn general responsibilities.

Floor Warden

Floor wardens are persons designated to ensure that all employees and visitors leave the area if an evacuation is required. A best practice recommendation is that each warden is responsible for no more than twenty (20) people. Floor wardens not only ensure everyone has left the designated location, but also ensure each person is accounted for at the designated gathering area in the safe area away from the hazard.

Firefighting

Persons designated as firefighters are trained in the use of fire extinguishers and other fire suppression equipment. They are the internal responders to fight a fire which is within their capabilities. The purpose is to give other employees and visitors time to evacuate the structure prior to the professional firefighters arriving at the facility. Once people in the building have been evacuated and/or the professional firefighters have arrived, these persons usually evacuate the building.

Chemical Release/Hazardous Waste Cleanup Responder

In a hazardous chemical or biological event these persons are trained in the proper use of personal protective equipment and appropriate methods for cleanup of the specific hazard. For example, in a hospital environment, many employees may be trained in the cleanup of blood borne pathogens, while a release of a toxic chemical will require personnel trained specifically for that chemical.

First Aid or Medical Responder

Some personnel may be trained to render First Aid in the event of a medical emergency. This would include the initial treatment of cuts, burns, amputations, heart attacks, strokes, shock, etc. Depending on the types of risks in your facility, these responders should be available to provide First Aid until professional medical responders arrive or the patient is taken to the appropriate facility.

Critical Facility (Plant) Operations Responder

Some operations are critical to a facility – power, water, oxygen delivery, etc. Personnel trained in critical facility operations may be designated to perform duties related to maintaining or the orderly shutdown of these operations.

Summary

These are a few of the more common facility level responders. Review your facility Emergency Action Plan to become familiar with responders for your specific environment.

Evacuation or Shelter-in-Place

Using common sense and following instructions of the designated incident commander, employees should either evacuate the facility or shelter-in-place.

If evacuation is determined to be the best option, employees should exit the facility following the floor plan routes and meet at the designated location outside the building. Employees should report to their designated floor warden or supervisor, as instructed. Employees should remain in the designated location until dismissed by the warden or supervisor to avoid putting professional responders in danger looking for a person who is already safe.

Shelter-in-place depends upon the type of emergency. It could be entering a room and blockading a door, it could be sealing a room to prevent outside hazardous chemical or biological substances from entering, it could be moving to a basement or safe room for a tornado event, or even moving to a higher floor in the event of imminent flood conditions.

Whether you should evacuate or shelter-in-place depends on the type of emergency and employees should follow directions of the incident commander or local authorities. Specific emergency events are discussed in the following section of this course.

Activity

Match the designated responder with their primary duties by dragging the title onto the duties.

Floor Wardens = Ensure that all employees and visitors leave the area if an evacuation is required

Firefighters = Use fire extinguishers and other fire suppression equipment

Chemical Release/Hazardous Waste Cleanup Responder = Use personal protective equipment and appropriate methods for cleanup of a specific hazard

First Aid or Medical Responder = Initial treatment of an injured person

Critical Facility (Plant) Operations Responder = Maintain or shutdown critical facility operations

Activity

Staying inside the facility during an emergency situation is called:

Egressing

Evacuation

Shelter-in-place

Staying put

Responding to an Emergency

Responding to an emergency

Natural Disasters

Natural disasters occur in every part of the country. This risk of a particular natural disaster depends on where you work. Specifically we'll look at what to do if you encounter blizzards, earthquakes, floods, hurricanes, and tornadoes. On the next five slides each slide begins with the map of how frequently that hazard occurs within regions of the United States. Review the map then click the information button for information and some best practices to stay safe.

Blizzard

Heavy snow is classified as a blizzard if the winds are at least thirty-five (35) miles per hour, with visibility of less than a quarter mile for three (3) or more hours. Blowing snow and snow squalls are also accompanied by wind and reduced visibility, but are not considered blizzards. Heavy snow falling without blizzard conditions can cause transportation problems and power outages.

Click the information button for details and safety tips.

Shelter

The best option during a blizzard event is to shelter-in-place. At home or work you should have a battery-powered NOAA Weather Radio with AM/FM bands, flashlight with extra batteries, high energy food which does not require refrigeration, water, medicine, adequate fuel supply, baby items (if needed), and a fire extinguisher. If feasible, an alternative emergency heat source should be available.

Outside

If you will be going outside, wear layers of loose, lightweight clothing. Cover your head with a hat, your hands with mittens, and your mouth to protect your lungs from cold air. Your exterior layer of clothing should be water repellant to help you stay dry.

If you must drive, make sure your vehicle is winterized and has a winter survival kit. AAA and many state Department of Transportation websites have lists to help you assemble your winter driving survival kit.

Earthquake

When you think earthquake your mind automatically thinks California, but did you know that earthquakes pose a significant risk in thirty-nine (39) states? Major metropolitan areas in Alaska, California, Idaho, Indiana, Massachusetts, Missouri, Nevada, New Mexico, New York, Oregon, Puerto Rico, South Carolina, Tennessee, Utah, and Washington all have a significant risk of an earthquake.

Prepare

Prepare for an earthquake by securing items which could fall, such as bookshelves, mirrors, light fixtures, file cabinets, etc. Make note of heavy furniture or areas that could provide protection from falling items. Make sure you have an emergency survival kit.

Inside

If you feel an earthquake and you are indoors, drop to your hands and knees and cover your head and neck. If possible, move under sturdy furniture and away from windows, outside walls, anything that is glass, and anything that could fall. If there is no heavy object to protect you, an inside corner is the safest place in a room. It is a myth that standing in a door frame is adequate protection in the event of an earthquake. If you become trapped in a building do not move around. Use your cell phone to call for assistance or tap on a pipe or wall to attract the attention of responders.

Outside

If you are outside when an earthquake starts, move away from buildings, overhead wires, or any other object which could fall. Drop to your hands and knees and cover your head and neck. If there is no open area, you may be safest inside the nearest building to avoid falling objects.

If you are in a vehicle, stop as soon as possible and stay in the vehicle. Do not stop by buildings, under overpasses or overhead wires, or anything else which could fall such as light poles and trees.

After

Remember, after an earthquake there will most likely be smaller aftershocks which may cause additional damage and objects to fall. If you feel a new quake start, follow the same safety precautions as you did for the main shock.

Flood

Floods happen in every state, with most states having a high risk of flooding. Click the information button for details and safety tips.

Watch

Flood watches are issued if weather conditions are right for possible flooding. Flood warnings are issued if a flood is happening or could happen imminently. Flooding can occur rapidly with little warning in creeks, streams, and rivers – even dry beds. As little as six (6) inches of moving water can knock you down. Two (2) feet of moving water can carry your vehicle away. Do not walk or drive in moving water.

Evacuate

The best option in a flood is to evacuate the area and move to higher ground. If you have time - disconnect electrical appliances, move items to the highest floor, and turn off gas and electricity at the main switch. You should have an emergency survival kit available. Underground or fallen electric wires present a risk of electric shock in standing water. Standing water may also be covering hazardous debris or hiding washed out sidewalks and roads. Do not re-enter the area until you are advised by local authorities it is safe to do so.

Hurricane

Hurricanes threaten the fewest number of states. Click the information button for details and safety tips.

Threat

Hurricanes are a threat to any area within approximately 400 miles of a coast – Atlantic, Pacific, or the Gulf of Mexico. Hurricane winds exceed 74 mph and have torrential rain which may cause flooding. The storm surge may be more than twenty (20) feet high and extend up to 100 miles down the coast. Hurricanes may also spawn tornadoes. Hurricane watches are issued within forty-eight (48) hours of a possible hurricane. Hurricane warnings are issued within thirty-six (36) hours.

Timetable

Ready.gov suggests the following timetable for pre-event actions beginning with the warning.

36 to 18 hours prior to the anticipated arrival ensure your emergency survival kit is stocked, your vehicle fueled and working, bring lightweight items inside, cover windows with shutters or boards, and keep informed of local conditions and instructions.

18 to 6 hours prior to the hurricane keep your cell phone fully charged and make sure to keep informed of local weather and emergency instructions.

6 hours or less before the hurricane, if you have not been instructed to evacuate you should shelter-in-place. Refrigerators and freezers should be set to the coldest setting to help prevent food spoilage should the electricity go out. Stay away from windows. Of course, keep updated with local weather conditions and emergency instructions.

Once the hurricane has passed, watch for downed utility lines and other debris. You may also find flooding conditions and you should follow flood precautions.

Tornado

Since 1961 every state, except Alaska, has reported a tornado. While “tornado season” in most states are spring and summer events, tornadoes have been recorded in every month of the year and can occur at any time of the day or night.

Click the information button for details and safety tips.

Average

The average tornado is less than ¼ mile wide on the ground, lasts less than ten (10) minutes, moves around thirty-five (35) miles per hour, winds less than 100 miles per hour, and moves from southwest to northeast. Tornadoes have been recorded over one mile wide, lasting up to four (4) hours, moving up to seventy (70) miles per hour, winds up to 318 miles per hour, and can move in any direction. If a tornado forms over water it is called a waterspout.

A tornado watch is issued when conditions are favorable for a tornado to form in the area. A tornado warning is issued when a tornado is indicated by radar or has been seen by a trained spotter. Unlike a hurricane where residents have advance warning, tornadoes may form and strike quickly.

Inside

If you are in a building when a tornado approaches, go to the lowest area possible or a small interior room. If no small interior rooms are available, an interior hallway is safest. Get under a heavy desk or table if possible. Stay away from windows and other glass.

If you are outside, recommendations vary from source to source. Some sources suggest if you are in an open area and cannot seek shelter in a building you should get into your vehicle, buckle your seatbelt, and cover your head and neck with your arms, blanket, cushion, etc. Other sources state you should never stay in a vehicle and you should seek shelter in a low area, such as a ditch. You should make your decision based on your best judgment, as either choice has risks. All the sources agreed that you should not seek shelter under an overpass or bridge.

After

After the tornado, move cautiously around debris and downed utility lines. If you are trapped, use your cell phone to call for assistance or tap on a pipe when rescuers are in the area. In severe tornado events, you may be required to evacuate the area until potential hazards are removed and the area is deemed safe by local authorities.

Activity

Every state, except _____, has reported at least one tornado since 1961.

Alaska

California

Hawaii

Maine

Washington

Activity

Which type of natural disaster can be accompanied by flooding and tornadoes?

Blizzard

Earthquake

Hurricane

Activity

Washington, Oregon, California, and Alaska are the only states with a significant risk for earthquakes.

True

False

Fires and Explosions

Most fires are preventable with appropriate precautions. Electrical equipment, cords, and wiring should be inspected regularly and repaired or replaced if damaged. Electrical circuits should not be overloaded. Chemicals and chemical soaked rags should be stored and disposed of safely. Flammable materials should be kept away from heat-producing equipment.

Explosions can happen from an accumulation of dust or from chemicals. Dust from grain and from manufacturing debris can be highly explosive if it comes into contact with an ignition source. Chemical explosions can occur if chemicals are improperly handled or if a gas leak develops. You should follow your facility guidelines for handling chemicals and gases.

Safety

Each facility should have clearly marked and illuminated exit signs, along with floor diagrams with evacuation routes posted. Every facility should have an adequate fire suppression system installed and appropriate portable fire extinguishers readily available. Designated employees should be trained in the proper use of these portable extinguishers.

Best

The best practice for a fire event is to evacuate the building. Employees should gather at their designated area until they are dismissed by the floor warden or supervisor. Once other employees have left the area, designated firefighter employees should leave the area and let the professional firefighters extinguish any remaining fire. Each facility should conduct regular fire drills to ensure that every employee knows their evacuation route and designated area away from the building.

In the event of a chemical spill or gas leak, trained personnel or professionals should be called to address the event.

Fire Extinguishers

There are five classes of portable extinguishers. This mnemonic makes it easy to remember what each is for: A is for Ash, B is for Boil, C is for Current, D is for Dynamite, and K is for Kitchen. Class A is for ordinary materials such as cloth, paper, rubber, wood, and many plastics. Class B is for flammable liquids including grease, gasoline, kerosene, and oil-based paints. Class C is for fires which involve electrical equipment – anything that is plugged in or energized. Class D is for fires involving metal powders, flakes, or shavings such as magnesium, titanium, potassium, and sodium. Class K are specifically designed for kitchen fires including those involving animal oils, vegetable oils, and other fats in cooking appliances. Many extinguishers are labeled for use on multiple types of fires – the most often seen is an ABC extinguisher. Use the appropriate extinguisher for the type of fire to avoid making a fire worse.

PASS

The mnemonic P.A.S.S. is used to help you remember how to use a portable extinguisher.

- **P**ull the pin to activate – you may need to break the tamper seal first.
- **A**im the nozzle or hose at the base of the fire – don't touch the horn of a CO2 extinguisher.
- **S**queeze the handle to start and continue the spray. And,
- **S**weep from side to side at the base of the fire – when you think it's out, you can stop, but watch for re-ignition.

For more information on fire safety and prevention, view the myLearningPointe course “OSHA Fire Safety.”

Hazardous Substances

Hazardous substances such as toxic gases, chemicals, and radiological materials could pose a risk in some workplaces. OSHA has specific standards for organizations who regularly handle these types of materials. In the event of a toxic gas release, chemical spill, radiological accident, or explosion, the best practice is to immediately evacuate the area and leave the cleanup to designated trained employees or professionals.

Outside

The same types of events could happen outside the facility, for example a truck carrying a toxic chemical overturns outside the building and is releasing a toxic gas. In this case the best practice is to shelter-in-place, sealing doors and windows to prevent the substance from entering the facility. Air flow equipment which may be drawing in outside air should also be turned off to reduce possible contamination. If a hazardous substance has been released into the outside environment, employees should shelter-in-place until appropriate local authorities give notification that it is safe to exit the facility.

Workplace Violence

Workplace violence happens every day. People who work in the healthcare and social service industries are at a greater risk than general workers. Workplace violence is classified into four categories: criminal intent, customer or client against an employee, employee-on-employee, and personal relationships. Violence could range from bullying to emotional or psychological abuse to physical actions to weapons being used.

Flags

All employees should be aware of the people in their environment and be on the lookout for red flags which could indicate a risk for violent behavior. These red flags include:

- A history of violence, conflicts, or substance abuse,
- Verbal statements which indicate a person is thinking about committing violent behavior or is overwhelmed by their situation,
- Changes in behavior and attitude reflected in their job performance,
- Organizational changes, such as reorganization, which may stress employees,
- Domestic problems, and
- Changes in mood or demeanor.

If an employee notes a red flag in an associate or client, this does not mean that workplace violence **will** occur, only that these red flags **could** indicate a possible problem. Employees should notify their supervisor or human resources if they have a concern about a particular associate or client so that appropriate assistance can be given and precautions taken.

Armed

If an armed individual is present in the facility, the best practice is to exit the facility, if you can do so without coming into the area where the threatening individual is. If you cannot safely exit the facility or believe you might attract the attention of the individual, you should shelter-in-place. Lock and blockade the door with heavy furniture. Mute cell phones and other devices which could create noise. Stay quiet and out of sight until local authorities arrive to escort you from the area.

For more information on workplace violence, view the myLearningPointe course “Violence in the Workplace.”

Civil Disturbances and Terrorism

USLegal.com defines civil disturbance as “acts of violence and disorder prejudicial to the public law and order. It includes acts such as riots, acts of violence, insurrections, unlawful obstructions or assemblages, or other disorders prejudicial to public law and order. It also includes all domestic conditions requiring or likely to require the use of federal armed forces.”

It defines terrorism as "any activity that-- (A) involves an act that-- (i) is dangerous to human life or potentially destructive of critical infrastructure or key resources; and (ii) is a violation of the criminal laws of the United States or of any State or other subdivision of the United States; and (B) appears to be intended-- (i) to intimidate or coerce a civilian population; (ii) to influence the policy of a government by intimidation or coercion; or (iii) to affect the conduct of a government by mass destruction, assassination, or kidnapping."

Prevention

These acts are beyond the control of any business and could happen any place at any time. The American Red Cross with the Department of Homeland Security have developed a list of suggestions for business titled “Homeland Security Advisory System Recommendations.” The best preventative step that anyone can take is to report suspicious activities and items to the appropriate security or law enforcement personnel.

Red Cross

If terrorism, domestic or foreign, occurs the Red Cross suggests you remain calm and follow the advice of local emergency officials. You may be asked to shelter-in-place or evacuate, depending upon your proximity to the event. If the event does occur near you:

- Check for injuries and provide First Aid.
- Check for damage with a flashlight, do not use candles, light matches, or operate electrical switches.
- Check for fires and fire hazards.
- Shut off gas at main.
- Make a call to your contact person (family member or friend) then stay off the phones unless you have a medical emergency.
- If you are instructed to evacuate, use routes as designated by local authorities.

Terrorism Preparedness, American Red Cross

Activity

The mnemonic to use a fire extinguisher is PASS. What does this stand for?

Pin, Aim, Saturate, Sweep

Pull, Activate, Sweep, Saturate

Pull, Aim, Squeeze, Sweep

Activity

Any fire extinguisher may be used on any type of fire.

True

False

Activity

If there is a toxic gas release from a building down the block from your office you should:

Evacuating your building and driving out of the area

Meet at your designated area outside the building

Shelter-in-place and seal doors and windows

Shelter-in-place by locking and blockading the door of a room

Activity

There are never any warning signs that an employee or client could commit workplace violence.

True

False

Activity

Since there is such a small risk of civil disturbance or terrorism, there is no need for your facility to have an emergency action plan for this type of event.

True

False

Conclusion

Conclusion

Objective Review

You should now be able to:

- List types of workplace emergencies
- Define what an Emergency Action Plan is
- Identify responses to workplace emergencies
- Identify specific roles in workplace emergencies
- Describe emergency reporting to appropriate authorities

Summary

Prior to a workplace emergency, organizations should assess risks and develop a facility specific emergency action plan to address risks which are most possible. No facility specific emergency action plan can address all possible risks, so it is up to each individual employee to remain calm and take actions to ensure their safety and the safety of associates. Designated trained individuals should practice and train to keep up to date with assigned responsibilities.

If you have any questions about your facility specific emergency action plan, please contact your supervisor, human resources, or designated emergency response coordinator.