

HAZARDOUS MATERIALS INCIDENTS

Explain that from industrial, chemical, and toxic waste to household detergents and air fresheners, hazardous materials are part of our everyday lives.



DISPLAY VISUAL

Hazardous Materials Are . . .

Substances that because of their chemical nature, pose a potential risk to life, health, or property if they are released or used improperly.

Tell the participants that hazardous materials are substances that because of their chemical nature, pose a potential risk to life, health, or property if they are released or used improperly.

Point out that hazards can exist during:

- Production.
- Storage.
- Transportation.
- Use.
- Disposal.



ASK QUESTION

What are some potential sources of hazardous materials?

Allow the participants time to respond. Summarize the discussion using the visual.



DISPLAY VISUAL

HAZARDOUS MATERIALS INCIDENTS (CONTINUED)

Sources of Hazardous Materials

- Chemical plants
- Service stations
- Hospitals
- Hazardous materials waste sites
- Transport vehicles

Explain that potential sources of hazardous materials can include:

- Chemical plants.
- Local service stations, which store and dispense gasoline and diesel fuel.
- Hospitals, which store a range of radioactive and flammable materials.
- Hazardous materials waste sites, of which there are approximately 30,000 in the United States.
- Transport vehicles, including trucks, trains, ships, and aircraft.

Stress that hazardous materials incidents can range from a chemical spill on a highway to groundwater contamination by naturally occurring methane gas. Hazardous materials incidents can occur anywhere.



ASK QUESTION

How can you tell which hazardous materials might be present in your community?

HAZARDOUS MATERIALS INCIDENTS (CONTINUED)

Allow the group time to respond. Then, point out that many communities have Local Emergency Planning Committees (LEPCs) that identify industrial hazardous materials and keep the community informed of the potential risk. All companies that have hazardous chemicals must report annually to the LEPC. The public is encouraged to participate in the process.

Urge the participants to contact their local emergency management office to find out if their community has an LEPC and how they can participate.



INSTRUCTOR'S
NOTE

Take a few moments to discuss the potential sources of hazardous materials in your community.



ASK QUESTION

How can you prepare for a hazardous materials incident?

Allow the participants time to respond. Summarize the discussion using the visual.



DISPLAY VISUAL

HAZARDOUS MATERIALS INCIDENTS (CONTINUED)

Hazardous Materials Incident Preparedness

- Find out what could happen.
- Address the hazards in your family emergency plan.
- Practice and maintain your plan.
- Learn the warning and information system for your community.

Be sure to cover all of the points below.

- Find out what could happen to you.
 - Ask your LEPC or emergency management office about community plans for responding to hazardous materials accidents at local plants or other facilities, or transportation accidents involving hazardous materials.
 - Ask your LEPC about storage and use of hazardous chemicals in your local area. Remember that some toxic chemicals are odorless.
 - Use the information gathered to evaluate the risks to your household. Determine how close you are to factories, freeways, or railroads that may produce or transport toxic waste.
- Address the hazards in your family emergency plan.
 - Be prepared to evacuate. An evacuation could last for a few hours or several days.
 - Be prepared to shelter in place; that is, to seek safety in your home or any other building you might be in at the time of a chemical release. At home, you should select an interior room to be used as a “safe room.”
 - Assemble a shelter kit to be used to seal the shelter room should a chemical release occur.
- Practice and maintain your plans for personal or family response to a hazardous materials incident.

HAZARDOUS MATERIALS INCIDENTS (CONTINUED)

- Learn the warning and information system for your community. Find out how local officials will notify you of a hazardous materials situation and what you should do to protect yourself and your family or coworkers.

Warning procedures could include:

- Outdoor warning sirens or horns.
- Emergency Alert System (EAS)—Information provided by radio and television.
- “All-Call” telephoning—An automated system for sending recorded messages.
- Residential route alerting—Messages announced to neighborhoods from vehicles equipped with public address systems.



INSTRUCTOR'S
NOTE

Take this opportunity to explain your community's warning system for hazardous materials incidents. If your community uses a siren system, be sure to draw distinctions between the sirens used for fires, tornadoes, etc., and hazardous materials incidents.



ASK QUESTION

What kind of room should be selected for sheltering in place within your home?

Allow the participants time to respond. If not mentioned by the group, explain that a safe room should:

- Be above ground.
- Be large enough to accommodate all household members and pets.
- Have the fewest possible exterior doors and windows.



ASK QUESTION

HAZARDOUS MATERIALS INCIDENTS (CONTINUED)

What should you do when you witness (or smell) a hazardous materials incident, or if you hear a warning signal?

Allow the participants time to respond. Summarize the discussion using the visual.



DISPLAY VISUAL

During a Hazardous Materials Incident

- Leave the area!
- Report the incident.
- If hearing a warning, listen for instructions.

Describe for the group the initial steps to take in case of a hazardous materials incident:

- Leave the area immediately. Report the emergency from a safe location uphill and upwind from the emergency site.
- If you witness (or smell) a hazardous materials incident, call 9-1-1, your local emergency notification number, or the fire department, as soon as possible.
- If you hear a warning signal, listen to local radio or television stations for further information. Then, follow instructions carefully.



INSTRUCTOR'S
NOTE

Remind the group that some toxic chemicals are odorless.



DISPLAY VISUAL

HAZARDOUS MATERIALS INCIDENTS (CONTINUED)

During a Hazardous Materials Incident

- Stay away from the incident site.
- If outside, stay upstream, uphill, and upwind.
- If in a motor vehicle, stop and find shelter.
- If asked to evacuate, do so immediately.
- If requested, stay indoors—shelter in place.

Use the visual to emphasize additional measures that the participants should take during a hazardous materials incident.

- Stay away from the incident site to minimize the risk of contamination.
- If you are caught outside, remember that gases and mists are generally heavier than air. Try to stay upstream, uphill, and upwind. (Hazardous materials can be quickly transported by water and wind.) Try to go at least one-half mile (10 city blocks) from the danger area; for many incidents, you will need to go much farther.
- If you are in a vehicle, stop and find shelter in a permanent building, if possible. If you must remain in your car, keep car windows and vents closed, and shut off the air conditioner and heater.
- If asked to evacuate your home, do so immediately. If authorities indicate that there is enough time, close all windows, shut vents, and turn off attic, heating, and air conditioning fans to minimize contamination.
- If requested, stay indoors—shelter in place.

HAZARDOUS MATERIALS INCIDENTS (CONTINUED)

Stress these additional precautions:

- Avoid contact with spilled liquids, airborne mists, or condensed solid chemical deposits. Keep your body fully covered to provide some protection. Wear gloves, socks, shoes, pants, and a long-sleeved shirt.
- Do not eat food or drink water that may have been contaminated.



ASK QUESTION

What should you do if asked to shelter in place?

Allow the participants time to respond.



DISPLAY VISUAL

If Asked to Shelter in Place

- Get household members and pets inside.
- Close and lock exterior doors and windows.
- Turn off air conditioners and ventilation systems.
- Go to the pre-selected safe room.

Emphasize the need to follow all of the instructions given by emergency authorities. Use the visual to explain the steps to take if asked to shelter in place:

- Get household members and pets inside as quickly as possible.
- Close and lock all exterior doors and windows. Close vents, fireplace dampers, and as many interior doors as possible.

HAZARDOUS MATERIALS INCIDENTS (CONTINUED)

- Turn off air conditioners and ventilation systems. In large buildings, building superintendents should set all ventilation systems to 100 percent recirculation so that no outside air is drawn into the building. If this is not possible, ventilation systems should be turned off.
- Go into the pre-selected safe room (the above-ground room with the fewest openings to the outside). Take a battery-powered radio, water, sanitary supplies, a flashlight, and your disaster supply kit (which should include pre-cut plastic sheeting for windows and vents, duct tape, modeling clay for sealing cracks, and a towel for under the door).
 - Close doors and windows in the room.
 - Tape around the sides, bottom, and top of the door.
 - Cover each window and vent in the room with a single piece of plastic sheeting, taping around all edges of the sheeting to provide a continuous seal.
 - If there are any cracks or holes in the room, such as those around pipes entering a bathroom, fill them with modeling clay or other similar material.

Tell the group that they should follow these additional precautions when sheltering in place during a hazardous materials incident:

- Remain in the room, listening to emergency broadcasts on the radio, until authorities advise you to leave your shelter.
- If authorities warn of the possibility of an outdoor explosion, close all drapes, curtains, and shades in the room. Stay away from windows to prevent injury from breaking glass.
- When authorities advise people in your area to leave their safe rooms, open all doors and windows and turn on air conditioning and ventilation systems. These measures will flush out any chemicals that infiltrated into the building.



ASK QUESTION

HAZARDOUS MATERIALS INCIDENTS (CONTINUED)

What about picking up children from school?

Point out that schools and other public buildings may institute procedures to shelter in place. If there is a hazardous materials incident while schools are in session, it may not be permissible to drive to the school to pick children up.



ASK QUESTION

What actions should you take after a hazardous materials incident?

Allow the participants time to respond. Then, use the visual to discuss post-incident actions.



DISPLAY VISUAL

Post-incident Actions

- Do not return home until instructed.
- Open windows and vents and turn on fans.
- Follow decontamination procedures.
- Learn how to clean up land and property.
- Report any lingering hazards.

Describe the following actions that the participants should take after a hazardous materials incident:

- If evacuated, do not return home until local authorities say that it is safe.
- Upon returning home, open windows and vents, and turn on fans to provide ventilation.

HAZARDOUS MATERIALS INCIDENTS (CONTINUED)

- Follow decontamination procedures for persons or items that have been exposed to a hazardous chemical:
 - Depending on the chemical, you may be advised to take a thorough cool shower or to stay away from water and follow another procedure.
 - Seek medical treatment for unusual symptoms as soon as possible.
 - If medical help is not immediately available, remove all of your clothing and shower thoroughly (unless local authorities say that the chemical is water reactive and advise you to do otherwise). Cut off clothing that would normally be removed by pulling over the head.
 - Change into fresh, loose clothing and seek medical help as soon as possible.
 - Place exposed clothing and shoes in tightly sealed containers. Do not allow them to have contact with other materials. Ask local authorities about proper disposal.
 - Advise everyone who comes into contact with you that you may have been exposed to a toxic substance.

- Find out from local authorities how to clean up your land and property.

- Report any lingering vapors or other hazards to your local emergency service office.

Ask the participants if anyone has additional questions, comments, or concerns about hazardous materials incidents.



DISPLAY VISUAL

HOUSEHOLD CHEMICAL EMERGENCIES

Household Chemicals

Knowing how to handle these products and how to react during an emergency can reduce the risk of injury.

Explain that nearly every household uses products that contain hazardous materials. Stress that while the risk of a chemical accident is slight, knowing how to handle these household chemicals and how to react during an emergency can reduce the risk of injury.



ASK QUESTION

What are some of the symptoms of poisoning?

Allow the participants time to respond. Summarize the discussion using the visual.



DISPLAY VISUAL

Symptoms of Poisoning

- Difficulty breathing
- Irritation of eyes, skin, throat, or respiratory tract
- Changes in skin color
- Headaches, blurred vision, dizziness
- Clumsiness or lack of coordination
- Cramps or diarrhea

HOUSEHOLD CHEMICAL EMERGENCIES (CONTINUED)

Explain that the symptoms of poisoning include:

- Difficulty breathing.
- Irritation of the eyes, skin, throat, or respiratory tract.
- Changes in skin color.
- Headaches, blurred vision, or dizziness.
- Clumsiness or lack of coordination.
- Cramps or diarrhea.



ASK QUESTION

How can you protect yourself from household chemical emergencies?

Allow the participants time to respond. Then, use the visual to discuss preparedness.



DISPLAY VISUAL

Chemical Emergency Preparedness

- Limit
- Isolate
- Eliminate
- Separate

HOUSEHOLD CHEMICAL EMERGENCIES (CONTINUED)

Tell the group that the best way to protect themselves from household chemical emergencies is to use the L.I.E.S. procedure.

- Limit the amount of hazardous materials in storage.
- Isolate products in approved containers, store them inside enclosed cabinets, and protect them from sources of ignition.
- Eliminate products that are no longer necessary by disposing of them properly.
- Separate incompatible materials (e.g., chlorine products and ammonia).

Urge the participants to read the label on any product and to follow all safety precautions recommended by the manufacturer.



ASK QUESTION

How should household chemicals be disposed of?

Tell the group that various chemicals require different methods of disposal. Stress the importance of following instructions on the product label and consulting with local agencies if they have questions on proper disposal. Use the visuals to discuss recommended disposal methods.



ASK QUESTION

What are some safe-handling tips for household chemicals?

Use the visual to discuss safe-handling tips.



DISPLAY VISUAL

HOUSEHOLD CHEMICAL EMERGENCIES (CONTINUED)

Household Chemical Safety

- Read directions before using.
- Store in safe, secure location.
- Avoid mixing chemical products.
- Never smoke while using chemicals.
- Clean up spills immediately.

Explain that to ensure the safe handling of chemicals in the household, the participants should:

- Read all directions before using a new chemical product. Be sure to store household chemicals according to the instructions on the label.
- Store chemicals in a safe, secure location, out of the reach of children.
- Avoid mixing household chemical products. Deadly fumes can result from the mixture of chemicals such as chlorine bleach and ammonia.
- Never smoke while using household chemicals. Avoid using hair spray, cleaning solutions, paint products, or pesticides near an open flame, pilot light, lighted candle, fireplace, wood-burning stove, etc. Although you may not be able to see or smell it, vapor could catch fire or explode.
- If you spill a chemical, clean it up immediately with rags. Be careful to protect your eyes and skin (wear gloves and eye protection). Allow the fumes in the rags to evaporate outdoors, then dispose of the rags by wrapping them in a newspaper and placing them in a sealed plastic bag in your trash can.

HOUSEHOLD CHEMICAL EMERGENCIES (CONTINUED)

Provide the participants with the following additional recommendations:

- Post the number of the nearest poison control center near all telephones. In an emergency situation, they may not have time to look up critical phone numbers.
- Learn to detect hazardous materials. Many hazardous materials do not have a taste or an odor, and some can be detected because they cause physical reactions such as watering eyes or nausea. Other hazardous materials exist beneath the ground and can be recognized by an oil or foam-like appearance.
- Learn to recognize the symptoms of poisoning.



ASK QUESTION

What should you do if a household chemical emergency occurs?

Allow the participants time to respond. Summarize the discussion using the visual.



DISPLAY VISUAL

During a Household Chemical Emergency

- If poison is consumed:
 - Find containers immediately.
 - Call poison-control center, follow instructions.
- If chemical gets into the eyes:
 - Follow emergency instructions on container.
 - Seek medical attention.
- If a fire or explosion occurs:
 - Evacuate residence immediately.
 - Move upwind to avoid breathing toxic fumes.
 - Call the fire department from outside.

HOUSEHOLD CHEMICAL EMERGENCIES (CONTINUED)

Be sure to cover the following points:

- If a poisonous substance is consumed:
 - Find any containers immediately. Medical professionals may need specific information from the container(s) to provide the best emergency advice.
 - Call the poison control center at 1-800-222-1222 and, if directed, 9-1-1 or local emergency number. Follow the emergency operator or dispatcher's instructions carefully. Do not give anything by mouth until medical professionals have advised you.

- If a chemical gets into the eyes:
 - Follow the emergency instructions on the container.
 - Continue the cleansing process even if the victim indicates that he or she is no longer feeling any pain, and then seek medical attention.

- If there is a fire or explosion:
 - Evacuate the residence immediately.
 - Move upwind and away to avoid breathing toxic fumes.
 - Call the fire department from outside (using a cellular phone or a neighbor's phone) and safely away from the danger.

Emphasize the following additional measures that the participants should take in case of a household chemical emergency:

- Wash hands, arms, or other exposed body parts that may have been exposed to the chemical. Chemicals may continue to irritate the skin until they are washed off.

- Discard clothing that may have been contaminated. Some chemicals may not wash out completely. Discarding clothes will prevent potential future exposure.

HOUSEHOLD CHEMICAL EMERGENCIES (CONTINUED)

- Administer first-aid treatment to victims of chemical burns.
Follow these steps to administer first aid:
 - Call 9-1-1 for emergency help.
 - Remove clothing and jewelry from around the injury.
 - Pour clean, cool water over the burn for 15 to 30 minutes.
 - Loosely cover the burn with a sterile or clean dressing. Be sure that the dressing will not stick to the burn.
 - Refer the victim to a medical professional for further treatment.

Ask the participants if anyone has additional questions, comments, or concerns about household chemical emergencies.
