

Fact Sheet

Chemical Attacks

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FEMA

Chemical agents are poisonous vapors, aerosols, liquids, and solids that have toxic effects on people, animals, or plants. They can be released by bombs or sprayed from aircraft, boats, and vehicles. They can be used as a liquid to create a hazard to people and the environment. Some chemical agents may be odorless and tasteless. They can have an immediate effect (a few seconds to a few minutes) or a delayed effect (2 to 48 hours). While potentially lethal, chemical agents are difficult to deliver in lethal concentrations. Outdoors, the agents often dissipate rapidly. Chemical agents also are difficult to produce.

A chemical attack could come without warning. Signs of a chemical release include people having difficulty breathing; experiencing eye irritation; losing coordination; becoming nauseated; or having a burning sensation in the nose, throat, and lungs. Also, the presence of many dead insects or birds may indicate a chemical agent release.

Know Your Risk and What to Do

- Contact your local emergency management office to learn about emergency plans.
- Get additional information from the Centers for Disease Control and Prevention (www.bt.cdc.gov), the American Red Cross (www.redcross.org) and the Environmental Protection Agency (www.epa.gov).
- Inquire about emergency plans and procedures at your child's school and at your workplace.
- Make a family disaster plan that includes out-of-town contacts and locations to reunite if you become separated. Be sure everyone knows home, work and cell phone numbers, and how to call 9-1-1.
- Assemble a 3-day disaster supplies kit with food, water, medical supplies, battery-powered radio and NOAA Weather Radio All Hazards, batteries, flashlights, and other items. If you have space and you are concerned about situations that might require lengthy shelter, consider storing food and water supplies for up to a month. For more information about assembling a disaster supplies kit, visit www.fema.gov/areyouready/.
- Gather important documents such as birth and marriage certificates, social security cards, passports, wills, deeds, and financial and insurance records. Store them in a fire and flood safe location or safe deposit box.

Know the Terms

Shelter-in-Place – One of the basic instructions you may be given in a chemical emergency is to "shelter in place." This is a precaution aimed to keep you and your family safe while remaining in your home. If you are told to shelter-in-place, take your children and pets indoors immediately and do the following:

- While gathering your family, provide some protection by breathing through a damp cloth.
- Close all windows in your home.
- Turn off all fans, heating and air conditioning systems; close the fireplace damper.
- Go to an above-ground room (not the basement) with the fewest windows and doors.
- Take your [Disaster Supplies Kit](#) with you.
- Ten square feet of floor space per person will provide sufficient air to prevent carbon dioxide build-up for up to five hours, assuming a normal breathing rate while resting. However, local officials are unlikely to recommend shelter in a sealed room for more than 2-3 hours because the effectiveness of such sheltering diminishes with time as the contaminated outside air gradually seeps into the shelter.
- Wet some towels and jam them in the crack under the doors.
- Tape around doors, windows, exhaust fans or vents. Use the plastic garbage bags to cover windows, outlets, and heat registers.
- If you are told there is danger of explosion, close the window shades, blinds, or curtains. To avoid injury, stay away from the windows.
- Stay in the room and listen to your radio until you are told all is safe or you are told to evacuate.
- Also you should ventilate the shelter when the emergency has passed to avoid breathing contaminated air still inside the shelter.

Before a Chemical Attack

Check your disaster supplies kit to make sure it includes:

- A roll of duct tape and scissors.
- Plastic for doors, windows, and vents for the room in which you will shelter in place. To save critical time during an emergency, pre-measure and cut the plastic sheeting for each opening.
- Choose an internal room to shelter, preferably one without windows and on the highest level.

During a Chemical Attack

If you are instructed to remain in your home or office building, you should:

- Close doors and windows and turn off all ventilation, including furnaces, air conditioners, vents, and fans.
- Seek shelter in an internal room and take your disaster supplies kit.
- Seal the room with duct tape and plastic sheeting, following the shelter-in-place instructions above.
- Listen to your radio for instructions from authorities.

If you are caught in or near a contaminated area, you should:

- Move away immediately in a direction upwind of the source.
- Find shelter as quickly as possible.

After a Chemical Attack

- Decontamination is needed within minutes of exposure to minimize health consequences.
- Do not leave the safety of a shelter to go outdoors to help others until authorities announce it is safe to do so.
- A person affected by a chemical agent requires immediate medical attention from a professional. If medical help is not immediately available, decontaminate yourself and assist in decontaminating others.

Decontamination guidelines are as follows:

- Use extreme caution when helping others who have been exposed to chemical agents.
- Remove all clothing and other items in contact with the body. Contaminated clothing normally removed over the head should be cut off to avoid contact with the eyes, nose, and mouth. Put contaminated clothing and items into a plastic bag and seal it. Decontaminate hands using soap and water. Remove eyeglasses or contact lenses. Put glasses in a pan of household bleach to decontaminate them and then rinse and dry.
- Flush eyes with water.
- Gently wash face and hair with soap and water before thoroughly rinsing with water.
- Decontaminate other body areas likely to have been contaminated. Blot (do not swab or scrape) with a cloth soaked in soapy water and rinse with clear water.
- Change into uncontaminated clothes. Clothing stored in drawers or closets is likely to be uncontaminated.
- Proceed to a medical facility for screening and professional treatment.

The Recovery Process

- For direct assistance to individuals' and families' immediate needs contact the American Red Cross or other local voluntary agencies.
- Check newspapers, television, or radio news for information on disaster assistance available.
- If you have property damage, contact your insurance company as soon as possible.
- For information on helping children deal with disaster, visit www.fema.gov or get a copy of FEMA 478 **Helping Children Cope with Disaster**. To obtain other fact sheets and publications call the FEMA publications warehouse at 1-800-480-2520.

Dangerous Chemical Attack Myth!	The Facts:
When told to evacuate an area due to a chemical attack, you should pick up your children from school first.	If you have children in school, they may be sheltered at the school. You should not try to get to the school if the children are being sheltered there. Transporting them from the school will put them, and you, at increased risk. Make sure you know the emergency plans and procedures for your child's school.