

CHEMICAL TERRORISM

Terrorists could deliberately release chemicals that poison people, animals, plants, or the environment. Chemical “agents” can be delivered in various forms—vapors, aerosols, liquids, and solids—and by a wide variety of methods, including sprays and bombs.

Some chemicals with potential for terrorism—nerve agents, mustard gases, and choking agents—were developed for use in war. Others are used in industry, and still others can be made from natural or everyday household materials. Some chemical agents are difficult to produce, but the potential for release by terrorist attack exists anywhere hazardous industrial or military chemicals are stored.



Chemical agents can produce effects quickly (within a few seconds) or slowly (as much as two days after exposure), and some are odorless and tasteless. It is difficult to deliver chemical agents in lethal concentrations, and—outdoors—agents often dissipate rapidly.

Hazardous chemicals can be categorized by type or effect. The Centers for Disease Control and Prevention describes the following categories:

- Anticoagulants—cause uncontrolled bleeding
- Biotoxins—come from plants or animals
- Blister agents (“vesicants”)—blister the eyes, skin, or throat and lungs
- Blood agents—absorbed into the blood
- Caustics (acids)—burn on contact
- Choking, lung, and pulmonary agents
- Incapacitating agents—alter consciousness or thinking
- Metallic poisons
- Nerve agents—prevent the nervous system from working properly
- Organic solvents—damage living tissues by dissolving fats and oils
- Tear gas and riot control agents
- Toxic alcohols
- Vomiting agents

How to Prepare

A chemical attack could come without warning, and there are few advance precautions:

- Get an **emergency supply kit**, and be sure to include duct tape, scissors, and plastic sheeting to seal the room in which you will shelter.
- Make a **family emergency plan**.
- Choose an internal room for sheltering in place, preferably on the top level and windowless.
- Consider precutting the plastic to save critical time during an emergency. Cut each piece several inches larger than the door, window or vent you want to cover so that it lies flat against the wall. Label each piece as to where it fits.

How to Recognize Chemical Attack

People exposed to hazardous chemicals may experience eye irritation; become nauseated; lose coordination; or have difficulty breathing or a burning sensation in the nose, throat, and lungs. The presence of many dead or ailing birds or insects may also indicate a chemical agent release. Your first warning may be an emergency broadcast or some other signal used in your community.

What to Do

If you are caught in or near an area contaminated by chemical attack or see signs of one—

- Try to define the source or impacted area, and find clean air quickly.
- If the chemical is inside a building where you are, try to exit the building without passing through the contaminated area. If there is no safe path out, move as far away as possible and shelter in place.
- If you are outside, quickly decide the fastest way to find clean air—move away upwind of the contamination, or enter the closest building for shelter.
- If you decide or are instructed to remain inside (“shelter in place”)—
 - Close doors, windows, and vents. Turn off all air-handling equipment. (Conventional building filters and cloth breathing filters are ineffective against chemical agents.)
 - Take an emergency supply kit, and go to an internal, upper-level room.
 - Seal the room with tape and plastic, if possible.
 - Monitor radio, TV, or the Internet for official information and instructions.
 - Do not to go outdoors until authorities announce it is safe to do so.

If your eyes water, your skin stings, or you have trouble breathing, you may have been exposed to a hazardous chemical. To minimize health consequences, decontaminate yourself and others as soon as possible—every minute counts:

- Remove as much clothing as possible, and double-seal it in plastic. Cut it away if necessary to avoid contact with the eyes, nose, and mouth. Remove contact lenses or glasses. (Seal lenses with clothes; wash glasses in household bleach or soap and rinse before wearing again).
- Find any source of water and flush the eyes, but do not rub them.
- Wash face, hair and other affected body parts with soap, gently so as not to scrub the chemical into the skin. (Washing is less critical if the chemical agent is a vapor instead of a liquid or solid.)
- Seek immediate medical attention.
- Avoid recontamination by later touching affected areas and bagged items. Use and decontaminate or safely discard gloves and tools.

Where to Find Additional Information

- Live radio and TV broadcasts may have the most current information on chemical terrorism events and the appropriate actions to take.
- The following agencies offer more detailed and updated information about chemical threats:
 - Federal Emergency Management Agency (FEMA)—
www.fema.gov/hazard/terrorism/chem/index.shtm
 - Department of Homeland Security (Ready.gov)—
www.ready.gov/america/beinformed/chemical.html
 - Centers for Disease Control and Prevention (CDC)—**www.bt.cdc.gov/chemical**
The CDC website offers detailed information about specific chemical threats in the categories listed on the other side of this sheet.
 - Agency for Toxic Substances and Disease Registry (ATSDR)—
www.atsdr.cdc.gov/2p-toxic-substances.html
The ATSDR website also offers detailed information about specific hazardous chemicals.

Semper Paratus

Be “Always Ready.” Get an emergency supply kit good for at least three days, make an emergency plan with your family, and be informed about what might happen.