

Explosive devices

TIPS

General Safety Guidelines:

Be aware of your surroundings.

Move or leave if you feel uncomfortable or if something does not seem right.

Take precautions when traveling. Be aware of conspicuous or unusual behavior. Do not accept packages from strangers. Do not leave luggage unattended. You should promptly report unusual behavior, suspicious or unattended packages, and strange devices to the police or security personnel.

Learn where emergency exits are located in buildings you frequent. Plan how to get out in the event of an emergency.

Terrorism

Terrorism is the use of force or violence against persons or property in violation of the criminal laws of the United States for purposes of intimidation, coercion, or ransom.

Terrorists often use threats to create fear among the public; try to convince citizens that their government is powerless to prevent terrorism; and get immediate publicity for their causes.

Acts of terrorism include threats of terrorism; assassinations; kidnappings; hijackings; bomb scares and bombings; cyber attacks (computer-based); and the use of chemical, biological, nuclear and radiological weapons.

High-risk targets for acts of terrorism include military and civilian government facilities, international airports, large cities, and high-profile landmarks. Terrorists might also target large public gatherings, water and food supplies, utilities, and corporate centers. Further, terrorists are capable of spreading fear by sending explosives or chemical and biological agents through the mail.

Explosions

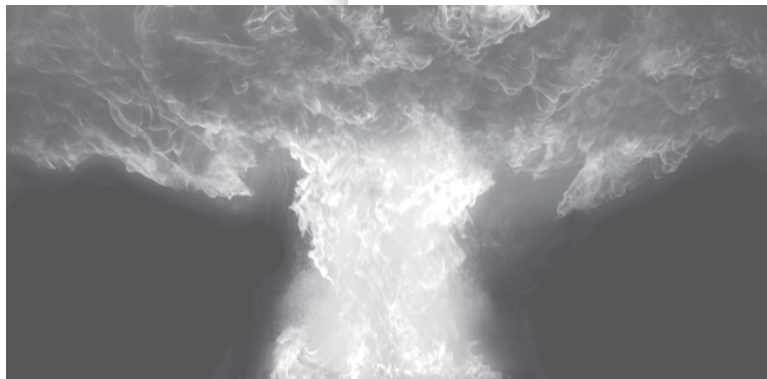
Terrorists have frequently used explosive devices as one of their most common weapons. Terrorists do not have to look far to find out how to make explosive devices; the information is readily available in books and other information sources. The materials needed for an explosive device can be found in many places including variety, hardware, and auto supply stores. Explosive devices are highly portable using vehicles and humans as a means of transport. They are easily detonated from remote locations or by suicide bombers.



Biological Threats

Biological agents are organisms or toxins that can kill or incapacitate people, livestock, and crops. The three basic groups of biological agents that would likely be used as weapons are bacteria, viruses, and toxins. Most biological agents are difficult to grow and maintain.

Many break down quickly when exposed to sunlight and other environmental factors, while others, such as anthrax spores, are very long lived. Biological agents can be dispersed by spraying them into the air, by infecting animals that carry the disease to humans and by contaminating food and water. Delivery methods include aerosols, animals, food and water contamination, and person to person.



Nuclear Blast

A nuclear blast is an explosion with intense light and heat, a damaging pressure wave, and widespread radioactive material that can contaminate the air, water, and ground surfaces for miles around. All nuclear devices cause deadly effects when exploded, including blinding light, intense heat (thermal radiation), initial nuclear radiation, blast, fires started by the heat pulse, and secondary fires caused by the destruction.

Chemical Threats

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.

Radioactive Fallout

Even if individuals are not close enough to the nuclear blast to be affected by the direct impacts, they may be affected by radioactive fallout. When a blast occurs near the earth's surface, millions of vaporized dirt particles also are drawn into the cloud. As the heat diminishes, radioactive materials that have vaporized condense on the particles and fall back to Earth. The phenomenon is called radioactive fallout. Fallout from a nuclear explosion may be carried by wind currents for hundreds of miles if the right conditions exist.

Nuclear radiation cannot be seen, smelled, or otherwise detected by normal senses. Radiation can only be detected by radiation monitoring devices. This makes radiological emergencies different from other types of emergencies. Monitoring can project the fallout arrival times, which will be announced through official warning channels.

**Intense
Light**



EMP

Dirty Bomb

Electromagnetic Pulse (EMP)

In addition to other effects, a nuclear weapon detonated in or above the earth's atmosphere can create an electromagnetic pulse (EMP), a high-density electrical field. An EMP acts like a stroke of lightning but is stronger, faster, and shorter. An EMP can seriously damage electronic devices connected to power sources or antennas, like communication systems, computers, electrical appliances, and automobile or aircraft ignition systems. Most electronic equipment within 1,000 miles of a high-altitude nuclear detonation could be affected. Battery-powered radios with short antennas generally would not be affected. Although an EMP is unlikely to harm most people, it could harm those with pacemakers or other implanted electronic devices.

Radiological Dispersion Device

Terrorist use of an RDD—often called a “dirty bomb”—is considered far more likely than use of a nuclear explosive device. An RDD combines a conventional explosive device—such as a bomb—with radioactive material. It is designed to scatter dangerous and sub-lethal amounts of radioactive material over a general area.

The primary purpose of terrorist use of an RDD is to cause psychological fear and economic disruption. Some devices could cause fatalities from exposure to radioactive materials. The number of deaths and injuries from an RDD might not be substantially greater than from a conventional bomb explosion.

The size of the affected area and the level of destruction caused by an RDD would depend on the sophistication and size of the conventional bomb, the type of radioactive material used, the quality and quantity of the radioactive material, and the local meteorological conditions. ■

