



The Federal Bureau of Investigations defines terrorism as “the unlawful use of force or violence against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in furtherance of political or social objectives.”

This definition includes three elements:

- Terrorist activities are illegal and involve the use of force
- The actions intend to intimidate or coerce
- The actions are committed in support of political or social objectives

A significant terrorism threat we face today is that of Weapons of Mass Destruction (WMD). The acronym "B-NICE" describes the five classifications of WMD's defined in the Biological Weapons and Terrorism Act.

Biological
Nuclear
Incendiary
Chemical
Explosive

This brochure provides a general introduction on hazardous biological, chemical and nuclear materials. This information is intended to provide basic awareness to VHA employees on three types of WMD that terrorists may use.



INDICATORS

Biological events may include:

- Unusual numbers of sick or dying people or animals
- Dissemination of unscheduled and unusual sprays
- Abandoned spray devices with no distinct odors
- Disease with an unusual geographic or seasonal distribution
- Fine powder or mist from packages or mail

Chemical events may include:

- Exposed individuals reporting unusual odors or tastes
- Large group of people experiencing similar symptoms such as clammy skin and pinpoint pupils
- Explosions dispersing liquids, mists, gases droplets or an oily film
- People or animals suddenly becoming nauseated, disoriented or experiencing breathing problems
- Numerous dead animals, fish, and birds
- Lack of insect life

Nuclear/Radiation:

- Is an invisible hazard
- Most people would be unaware they had been posed to radiation

**Department of Veterans Affairs
 Veterans Health Administration
 Office of Public Health and
 Environmental Hazards (13)
 February 2002**



**Employee
 Awareness of
 the Potential
 Hazards of
 Weapons of
 Mass
 Destruction**

Biological Agents



Definition

Biological agents are pathogenic microorganisms or biologically produced toxins that can cause illness and death in human, animal, or plant populations.

Possible routes of entry

- Inhalation
 - Aerosols
 - Spray devices
- Ingestion
 - Contaminated water
 - Contaminated food
- Absorption (least possible route of entry)
 - Direct skin contact

Types/Examples

- Bacteria (single cell organisms that multiply by cell division and cause disease in humans, animals and plants)
 - Anthrax
 - Cholera
 - Plague
- Toxins (toxic substances of natural origin produced by an animal, plant, or microbe)
 - Botulism
 - Ricin
 - Staphylococcal
- Viruses (simplest type of microbe that will not live long outside a host)
 - Smallpox
 - Ebola fever

Chemical Agents



Definition

The Chemical Weapons Convention defines toxic chemical weapons as "any chemical which, through its chemical effect on living processes, may cause death, temporary loss of performance, or permanent injury to people and animals."

Possible routes of entry

- Inhalation
- Absorption
- Ingestion

Types

- Choking agents (puts stress on respiratory system and causes asphyxiation)
 - Phosgene
 - Chlorine
- Blood agents (toxic to blood at high concentrations)
 - Hydrogen cyanide
 - Cyanogens chloride
- Blister agents (vaporized oily liquids that induce symptoms such as respiratory distress, mucus membrane irritation, and burn and blister soft tissue)
 - Mustard gas/agent
 - Lewisite
- Nerve agents (disables nervous system and are toxic even in small concentrations)
 - Sarin
 - Tabun
- Irritating agents (used as riot control agents) and cause respiratory, digestive, and eye discomfort.
 - Mace
 - Capsaicin (pepper spray)
 - Tear gas

Nuclear/Radiation



Definition

Weapons that release enormous amounts of energy through the process of nuclear fission, nuclear fusion or conventional explosives that scatter radioactive materials.

Possible routes of entry

- Inhalation
- Absorption
- Ingestion

Types

- Alpha Particles
 - The least penetrating radiation
 - Can be shielded by a sheet of paper or by human skin
 - Alpha-emitting materials can be harmful to humans if the materials are inhaled, swallowed, or absorbed through open wounds.
- Beta Particles
 - Are moderately penetrating
 - Can cause serious damage to health if they enter your body
 - Can penetrate human skin to the "germinal layer," where new skin cells are produced
- Gamma Particles
 - Are the most penetrating of the three types of radiation
 - Thick materials such as lead, steel, or concrete need to be used for shielding

