

# Emergency

Care and Transportation of the Sick and Injured



Section 7: Operations

38: Response to Terrorism and Weapons  
of Mass Destruction

Response to Terrorism and  
Weapons of Mass Destruction

38

## Cognitive Objectives (1 of 6)

1. Define international and domestic terrorism.
2. List the different terrorist agenda categories.
3. Describe the threat levels (or colors) used by the Department of Homeland Security (DHS) to notify responders of the potential for a terrorist attack.
  - SEVERE (RED)
  - HIGH (ORANGE)
  - ELEVATED (YELLOW)
  - GUARDED (BLUE)
  - LOW (GREEN)

## **Cognitive Objectives** (2 of 6)

4. On the basis of DHS threat levels, discuss what actions the EMT should take during the course of their work to heighten their ability to respond to and survive a terrorist attack.
5. Recognize the hallmarks of a terrorist event.
6. List potential terrorist targets and their vulnerability.

## **Cognitive Objectives** (3 of 6)

7. Discuss these key principles to assuring responder safety at the scene of a terrorist event:
  - Establishing scene safety
  - Approaching the scene
  - Protective measures
  - Establishing a safety zone
  - Ongoing reevaluation of scene safety
  - Awareness of secondary devices

## **Cognitive Objectives** (4 of 6)

8. Discuss the following critical actions that the EMT must perform to operate on the scene following a terrorist attack:
  - Notification
  - Establish command
  - Patient management

## **Cognitive Objectives** (5 of 6)

9. Describe and list the four weapons of mass destruction (WMD).
10. Describe historical events dealing with WMD.
11. List nuclear/chemical/biological/explosive agents that may be used by a terrorist.
12. Describe the routes of exposure for chemical agents.
13. Describe the routes of exposure for biological agents.

## **Cognitive Objectives** (6 of 6)

14. Describe the routes of exposure for nuclear/radiological dispersal devices (RDD).
15. Discuss the clinical manifestations of exposure to the various WMD agents.
16. Describe the treatment to be rendered to a victim of a nuclear/chemical/biological/explosive attack.

## **Affective Objectives**

17. Discuss the “new age” terrorist’s trend toward apocalyptic violence and indiscriminate death.
18. Explain the rationale behind NOT entering the WMD scene or being UNABLE to treat contaminated victims, and the possible impact on the EMT-B.

## **Psychomotor Objectives**

19. Demonstrate the patient assessment skills to assist the victim of a nuclear / chemical / biological / explosive agent.
  20. Demonstrate the use of the nerve agent antidote (MARK 1) auto-injector kit.
  21. Given a scenario of a terrorist event, establish scene safety and begin patient management.
- All of the objectives in this chapter are noncurriculum objectives.

## **Terrorist Groups**

- Violent religious groups
- Doomsday cults
- Extremist political groups
- Technology terrorists
- Single-issue groups

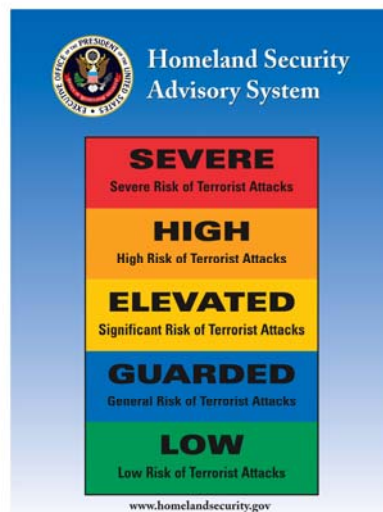
## Types of WMD

- Nuclear
- Chemical
- Biological
- Explosives



## Threat Level

Be aware of the threat level issued by the Department of Homeland Security.



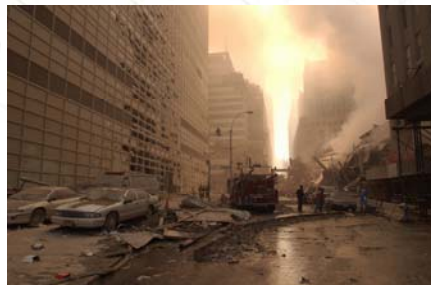
## Recognizing a Terrorist Event

- Type of location
- Type of call
- Number of patients
- Victims' statements
- Pre-incident indicators



## Response Actions

- Scene safety
- Responder safety
- Notification procedures
- Establishing command
- Reassessing scene safety



## **Characteristics of Chemical Agents**

- Persistency/volatility
- Route of exposure
- Vapor hazard
- Contact hazard

## **Vesicants (Blister Agents)**



## **Signs and Symptoms of Vesicant Exposure**

- Skin irritation/blisters
- Eye injuries
- Respiratory problems



## **Treatment of Vesicant Exposure**

- Decontaminate.
- Support airway.
- Transport to burn center.

## **Pulmonary Agents**

- Inhaled gases
- Causes damage to lung tissue
- Two classes:
  - Chlorine
  - Phosgene

## **Treatment of Pulmonary Exposure**

- Have patient removed from contaminated atmosphere.
- Aggressively manage airway.
- Provide rapid transport.

## Nerve Agents

- Vapor or contact hazards
- Causes overstimulation of organs
- Two classes
  - G series
  - V series

## Signs and Symptoms of Nerve Agents

- Two mnemonics:
  - **S**alivation, **S**weating
  - **L**acrimation  
(excessive tearing)
  - **U**rination
  - **D**efecation, **D**rooling,  
**D**iarrhea
  - **G**astric upset and  
cramps
  - **E**mesis (vomiting)
  - **M**uscle twitching
  - **D**iarrhea
  - **U**rination
  - **M**iosis
  - **B**radycardia  
**B**ronchospasm
  - **E**mesis
  - **L**acrimation
  - **S**eizures, **S**alivation,  
**S**weating

## **Treatment of Nerve Agent Exposure**

- Patient decontamination
- Airway and ventilatory support
- Administration of MARK 1 kit

## **Insecticides**

- Many insecticides are organophosphates.
- Lower concentrations than found in nerve agents

## **Metabolic Agents**

- Cyanide
- Common in industrial settings
- Affect the body's ability to use oxygen

## **Signs and Symptoms**

- Breathing difficulty
- Altered mental status
- Seizures
- Coma
- Respiratory/cardiac arrest

## **Treatment**

- Patient decontamination must occur.
- Support ABCs.

## **Biological Agents**

- Viruses
- Bacterium
- Neurotoxins

## **Viruses**

- Require living host
- Replicate themselves within healthy cells

## **Smallpox**

- Highly contagious
- Utilize good BSI.
- Begins with high fever, body aches
- Lesions identical
- Blisters begin on face and extremities.
- Vaccine linked to medical complications.

## **Viral Hemorrhagic Fevers**

- Ebola, Rift Valley, and Yellow Fever
- Cause blood to seep from tissues and blood vessels
- Initially present with flu-like symptoms
- Use BSI.

## **Bacteria**

- Do not require a host
- Can be fought with antibiotics
- Most infections begin with flu-like symptoms.

## Cutaneous Anthrax



## Plague



## **Neurotoxins**

- Most deadly substances known
- Produced by plants, marine animals, molds, and bacteria
- May be inhaled, ingested, or injected

## **Botulinum Toxin**

- Most potent neurotoxin
- Produced by bacteria
- Causes paralysis
- Paralysis leads to respiratory arrest

## Ricin

- Comes from castor beans
- Causes pulmonary edema, respiratory/circulatory failure
- Treatment = respiratory and cardiovascular support

## EMT Roles During Biological Events

- Syndromic surveillance
- Identification of outbreaks
- Strategic National Stockpile
- Participation at distribution sites



## Types of Radiation



## Radiological/Nuclear Devices

- Radiological dispersal devices
  - Dirty bombs
- Nuclear weapons
  - Nuclear bombs/missiles
  - Special Atomic Demolition Munitions

## **Signs and Symptoms of Radioactive Exposure**

- Varies depending on:
  - Amount of radiation
  - Route of exposure
- Low exposure: nausea, vomiting, diarrhea
- Moderate exposure: first-degree burns, hair loss, depletion of immune system, cancer
- Severe exposure: Second/third-degree burns, cancer, death

## **Treatment**

- Decontaminate if needed.
- Support ABCs.
- Treat associated burns and trauma.

## **Protective Measures**

- Time
- Distance
- Shielding