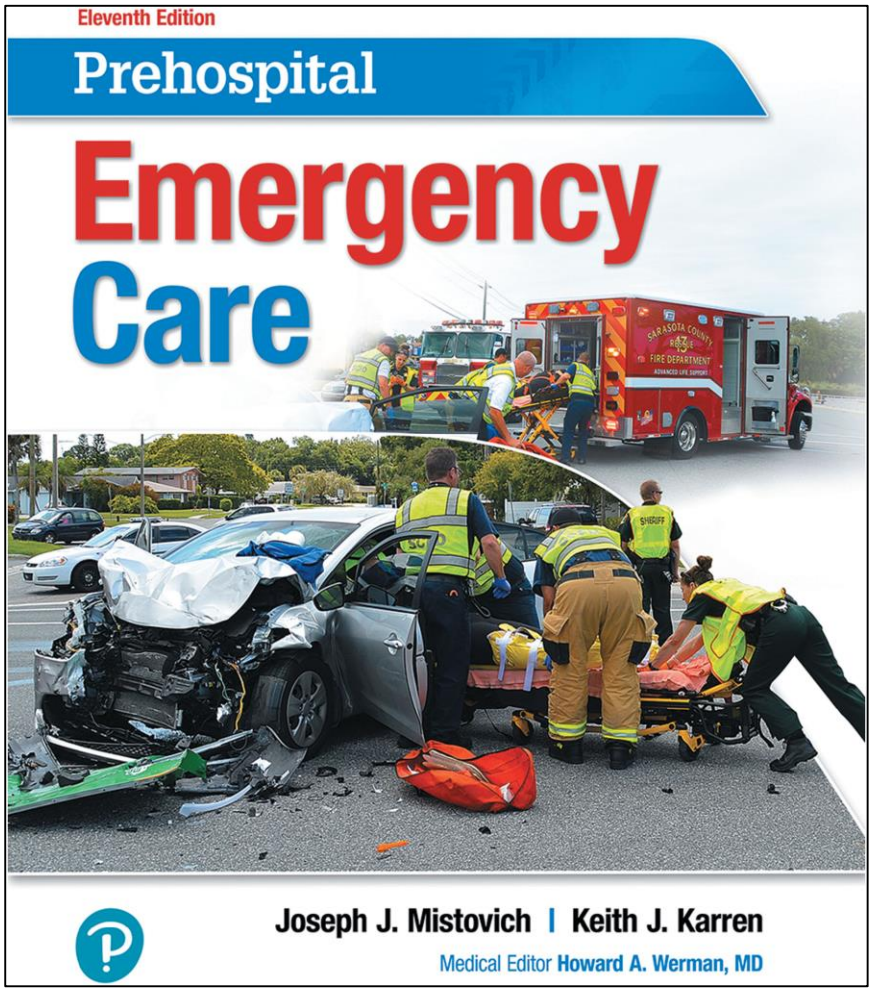
Prehospital: Emergency Care

Eleventh Edition



Chapter 2

Workforce Safety and Wellness of the EMT

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Introduction

- EMS providers' safety is the first priority on every call.
- EMTs must be prepared to deal with emotions of patients and their family members.
- EMTs must be concerned with their own physical and emotional wellness.

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Emotional Aspects of Emergency Care (1 of 12)

- Death and dying
  - Inherent parts of emergency medicine
- Five emotional stages:
  - Denial
  - Anger
  - Bargaining
  - Depression
  - Acceptance

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Emotional Aspects of Emergency Care (2 of 12)

- Dealing with the dying patient, their family members, and bystanders
  - EMT has obligation to help the patients and others.
  - Each individual may be in their own respective stage.
  - Textbook lists several ways to reduce their emotional burden (p 21).

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Emotional Aspects of Emergency Care (3 of 12)

- High stress situations and stressors related to the profession
  - Long hours
  - Boredom between calls
  - Working too much, too hard
  - Getting little recognition
  - Having to respond instantly

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Emotional Aspects of Emergency Care (4 of 12)

- High stress situations and stressors related to patient care
  - Making life-and-death decisions, fearing serious errors
  - Being responsible for someone's life
  - Abuse and neglect of pediatrics and geriatrics
  - Caring for infants and children
  - Mass casualty incidents
  - Injury or death of a coworker

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Emotional Aspects of Emergency Care (5 of 12)

- Stress Reactions
  - EMTs may suffer three types of stress reactions:
    - Acute stress reaction
    - Delayed stress reaction
    - Cumulative stress reaction (i.e. burnout)

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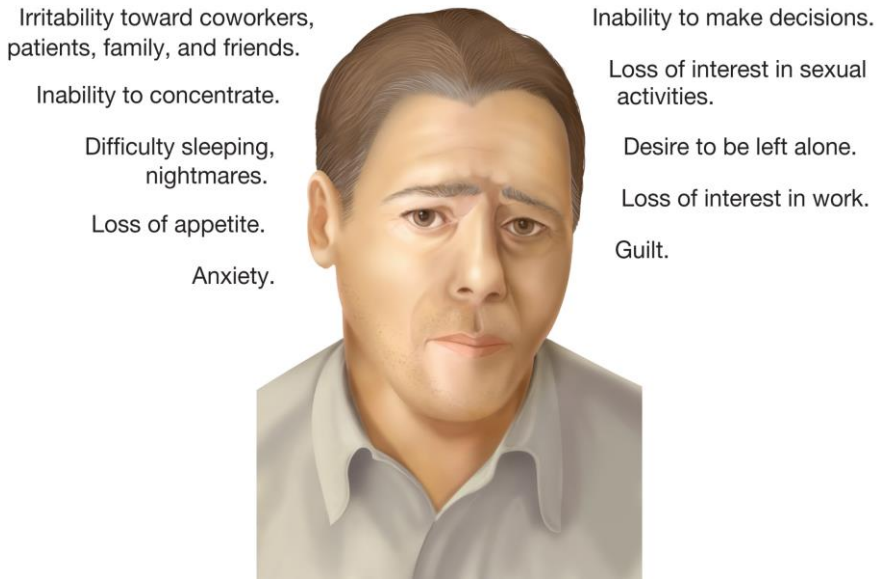
Emotional Aspects of Emergency Care (6 of 12)

- Stress Reactions
  - General categories of stress findings
    - Thinking
    - Psychological
    - Physical
    - Behavioral
    - Social



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Emotional Aspects of Emergency Care (7 of 12)

- Stress Management
  - Making lifestyle changes by the EMT
    - Avoid self medication
    - Exercise often

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Emotional Aspects of Emergency Care (8 of 12)

- Stress Management
  - Making lifestyle changes by the EMT
    - Diet considerations
    - Learn to relax
  - Take measures to maintain balance in your life

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Emotional Aspects of Emergency Care (9 of 12)

- Stress Management
  - Recognize the responses of family and friends:
    - Lack of understanding
    - Fear of separation
    - Inability to plan
    - Frustrated desire to share

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Emotional Aspects of Emergency Care (10 of 12)

- Stress Management
  - Make changes in your work environment.
    - Develop a buddy system with a coworker.
    - Encourage and support coworkers, resist the temptation to dwell on the negative.
    - Take a break to exercise.
    - Request shifts that allow more relaxation.
    - Seek professional help if necessary.

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Emotional Aspects of Emergency Care (11 of 12)

- Critical Incident Stress Management
  - Symptoms of burnout may occur after exposure to a critical incident.
  - Sufferers of critical incident stress also may have repeated mental images of the situation, inability to function on subsequent calls, and fear of continuing work in EMS.

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Emotional Aspects of Emergency Care (12 of 12)

- The critical incident stress management (CISM) process consists of two approaches:
  - Critical incident stress debriefing (CISD)
  - Critical incident stress defusing

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Scene Safety (1 of 35)

- What is scene safety?
  - Taking appropriate measures to protect yourself from infectious diseases
  - Following proper rescue procedures
  - Handling violence properly
  - Being an advocate for safety

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Scene Safety (2 of 35)

- Protecting Yourself from Disease
  - Infectious diseases are caused by pathogens, which include:
    - Bacteria
    - Viruses
    - Fungi
    - Protozoa
    - Helminths

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Scene Safety (3 of 35)

- Types of Pathogens
  - Bacteria
    - Single-celled organisms that can reproduce
    - Usually respond to antibiotic therapy (when needed)

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Scene Safety (4 of 35)

- Types of Pathogens
  - Viruses
    - Require a host to reproduce
    - Invade cells in order to reproduce new viral particles
    - Not responsive to antibiotics; there are few medications to treat viral infections
    - Most cause mild, self-limiting illnesses

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Scene Safety (5 of 35)

- Types of Pathogens
  - Fungi
    - Plant-like microorganisms
    - Usually do not cause illness when the immune system is functioning normally
    - Can be a problem in patients with immune deficiency

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Scene Safety (6 of 35)

- Types of Pathogens
  - Protozoa
    - Single-celled organisms capable of movement
    - Often found in the soil
    - Illnesses include:
      - Some forms of gastroenteritis
      - Some vaginal infections
      - Malaria

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Scene Safety (7 of 35)

- Types of Pathogens
  - Helminths (parasitic worms)
    - Examples include:
      - Roundworms
      - Flukes
      - Tapeworms
      - Hookworms

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Scene Safety (8 of 35)

- Protecting Yourself from Disease
  - Infectious disease are contracted from pathogens.
  - Some infectious diseases can be passed from person to person, and are called communicable diseases.
  - Diseases can be spread directly or indirectly.

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An Open Sore on the Arm of an Apparent Drug User is an Example of an Open Wound that has the Potential to Spread Infection

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Scene Safety (9 of 35)

- Protecting Yourself from Disease
  - Standard Precautions
    - Guidelines developed by OSHA to protect health care workers from communicable disease.
    - Employers must ensure that the Standard Precautions are available, and must have a written exposure control plan.

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Scene Safety (10 of 35)

- Protecting Yourself from Disease
  - Standard Precautions
    - Hand washing
      1. Wet
      2. Lather
      3. Scrub
      4. Rinse
      5. Dry

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Scene Safety (11 of 35)

- Protecting Yourself from Disease
  - Alcohol-based hand sanitizer can be used when you do not have access to soap and water.
    - Use a product with at least 60 percent alcohol.
    - As soon as possible, wash with soap and water.

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Scene Safety (12 of 35)

- Protecting Yourself from Disease
  - Personal protective equipment (PPE)
    - Eye protection

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Scene Safety (13 of 35)

- Protecting Yourself from Disease
  - Personal protective equipment (PPE)
    - Protective gloves

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Scene Safety (14 of 35)

- Protecting Yourself from Disease
  - Personal protective equipment (PPE)
    - Gowns
    - Masks

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Scene Safety (15 of 35)

- Protecting Yourself from Disease
  - Personal protective equipment (PPE)
    - HEPA respirator
    - N-95 respirator

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Scene Safety (16 of 35)

- Protecting Yourself from Disease
  - Additional guidelines
    - Use disposable equipment.
    - Wash soiled clothing/uniforms.
    - Document any exposures.
    - Bag infectious items.

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Scene Safety (17 of 35)

- Protecting Yourself from Disease
  - Additional guidelines
    - Use sharps containers.
    - Clean up blood/body fluids.
    - Clean visible soil from nonhorizontal walls.
    - Always wash hands thoroughly.

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Scene Safety (18 of 35)

- Protecting Yourself from Disease
  - Additional guidelines
    - Cleaning
    - Disinfecting
    - Sterilization

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Scene Safety (19 of 35)

- Protecting Yourself from Disease
  - Immunizations
  - Influenza (annually)
  - Tetanus (every 10 years)
  - Hepatitis B
  - Polio
  - Rubella
  - Measles
  - Mumps
  - Varicella (chickenpox)

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Scene Safety (20 of 35)

- Protecting Yourself from Disease
  - Reporting exposures
    - Report exposures following state and local laws and your employer's policies.
    - Report the exposure as soon as possible to your supervisor, including the date, time, and details of the exposure.

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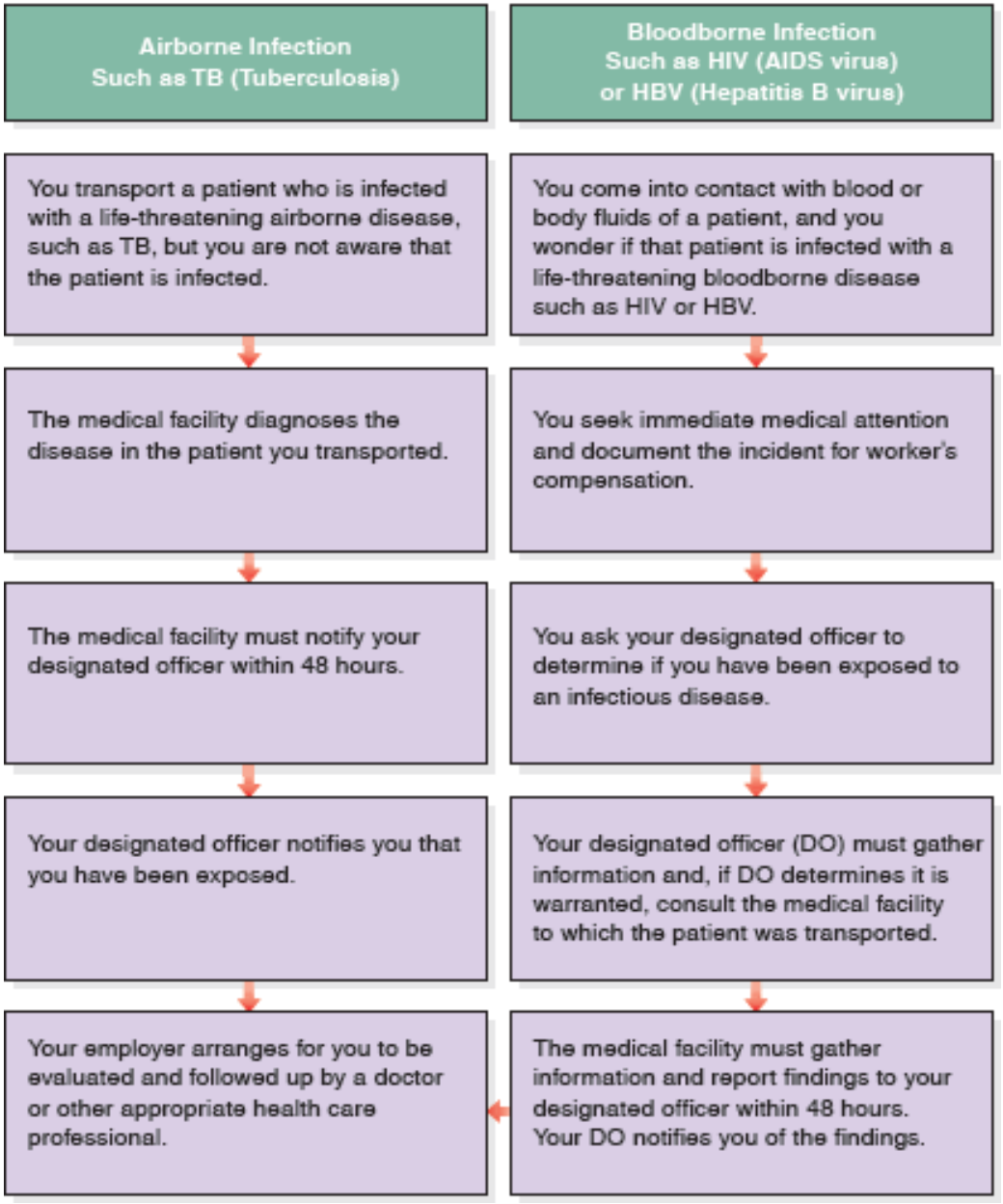
INFECTIOUS DISEASE EXPOSURE PROCEDURE



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Scene Safety (22 of 35)

- Infectious Diseases of Concern
  - Hepatitis
    - Hepatitis B and hepatitis C are viral infections of the liver.
    - Contracted through contact with blood and body fluids.
    - Infected persons can be asymptomatic, but still transmit the disease.

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Scene Safety (23 of 35)

- Infectious Diseases of Concern
  - Tuberculosis
    - Most often tuberculosis affects the lungs, but it can affect other tissues.
    - Spreads by breathing in the infected droplets of sputum of a the patient with a cough.
    - There are antibiotic-resistant forms.

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Scene Safety (24 of 35)

- Infectious Diseases of Concern
  - Acquired immune deficiency syndrome (AIDS)
    - Results from infection with the human immunodeficiency virus (HIV)
    - More difficult than hepatitis B to transmit through occupational exposure
    - Impairs the body's ability to fight infections

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Scene Safety (25 of 35)

- Infectious Diseases of Concern
  - Severe acute respiratory syndrome (SARS)
    - Spread by person-to-person respiratory contact
    - Accompanied by high fever, headache, body aches

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Scene Safety (26 of 35)

- Infectious Diseases of Concern
  - West Nile virus
    - Mosquito-borne
    - Most infected patients have no symptoms or mild symptoms
    - A few patients develop severe symptoms that can last for weeks

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Scene Safety (27 of 35)

- Infectious Diseases of Concern
  - Ebola
    - Viral hemorrhagic fever
    - Normally found on African continent

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Scene Safety (28 of 35)

- Infectious Diseases of Concern
  - Zika virus disease
    - Spread by mosquitos
    - Rarely fatal, but can cause birth defects to unborn child of infected mother
    - No vaccination exists
    - Avoidance and prevention are key to limiting infection

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Scene Safety (29 of 35)

- Infectious Diseases of Concern
  - Multidrug-resistant organisms
    - Common to patients who frequent the health care system.
    - May cause pneumonia; infections of the blood, ear, sinuses, and skin; peritonitis.
    - Follow Standard Precautions, and any additional instructions provided by the medical facility.

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Table 2-1 Infectious Diseases, Transmission, and Personal Protective Measures (1 of 3)

Disease	Transmission Mode	Incubation Period	Protective Measures
HIV/AIDS	Blood, semen, vaginal fluid, blood transfusion, needlestick, transplacental	Months	Gloves, eyewear, hand washing
Hepatitis B and C	Blood, semen, vaginal fluid, needlestick, transplacental, human bite, sexual contact (HBV)	Weeks or months	Gloves, eyewear, hand washing
Tuberculosis	Respiratory secretions, airborne or direct contact	2–6 weeks	Gloves, eyewear, HEPA or N-95 respirator, hand washing
Influenza	Airborne droplets, direct contact with body fluids	1–3 days	Gloves, surgical mask, hand washing
Chicken pox (varicella)	Airborne droplets, direct contact with open sores	11–21 days	Gloves, surgical mask, hand washing

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Table 2-1 Infectious Diseases, Transmission, and Personal Protective Measures (2 of 3)

Disease	Transmission Mode	Incubation Period	Protective Measures
Bacterial meningitis	Oral and nasal secretions	2–10 days	Gloves, surgical mask, hand washing
Pneumonia	Respiratory secretions and droplets	1–3 days	Gloves, surgical mask, hand washing
German measles (rubella)	Airborne droplets, transplacental	10–12 days	Gloves, surgical mask, hand washing
Whooping cough (pertussis)	Respiratory secretions, airborne droplets	6–20 days	Gloves, surgical mask, hand washing
Staphylococcal skin infection	Direct contact with infected lesion or contaminated object	1–3 days	Gloves, hand washing

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Table 2-1 Infectious Diseases, Transmission, and Personal Protective Measures (3 of 3)

Disease	Transmission Mode	Incubation Period	Protective Measures
Severe acute respiratory syndrome (SARS) coronavirus	Respiratory airborne, direct contact	10 days	Gloves, surgical mask, hand washing, eye protection
Ebola virus disease (EVD)	Direct contact with blood or contact with body fluids	2–21 days (average onset of 8–10 days)	Gloves, hand washing, N-95 respirator, surgical/isolation gown, boot covers, specialized training in donning/doffing PPE
Zika virus disease (ZVD)	Bite of an infected **Aedes** mosquito, from pregnant woman to fetus, sexual contact with an infected person	3–12 days	Avoiding mosquito bites, abstaining from sex with an infected or potentially infected partner (using condoms during sexual intercourse reduces the risk), preventing pregnancy. avoiding mosquito exposure in areas where ZVD is known to occur

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Scene Safety (30 of 35)

- Protecting Yourself from Injury
  - Prevention strategies include:
    - Use of vehicle restraint systems
    - Safe lifting and moving techniques
    - Getting adequate sleep
    - Physical fitness and proper nutrition
    - Using Standard Precautions

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Scene Safety (31 of 35)

- Protecting Yourself from Injury
  - Other actions to protect yourself must be taken in the following situations:
    - Rescue operations
    - Hazardous materials incidents
    - Violence/crime scenes
    - Biological and chemical weapons of mass destruction

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Scene Safety (32 of 35)

- Protecting Yourself from Injury
  - Other actions to protect yourself must be taken in the following situations:
    - Hazardous materials
      - Use binoculars and the U.S. DOT **Emergency Response Guidebook**.
      - Request a hazardous materials team.
      - Allow hazardous materials personnel to decontaminate patients and bring them to you.

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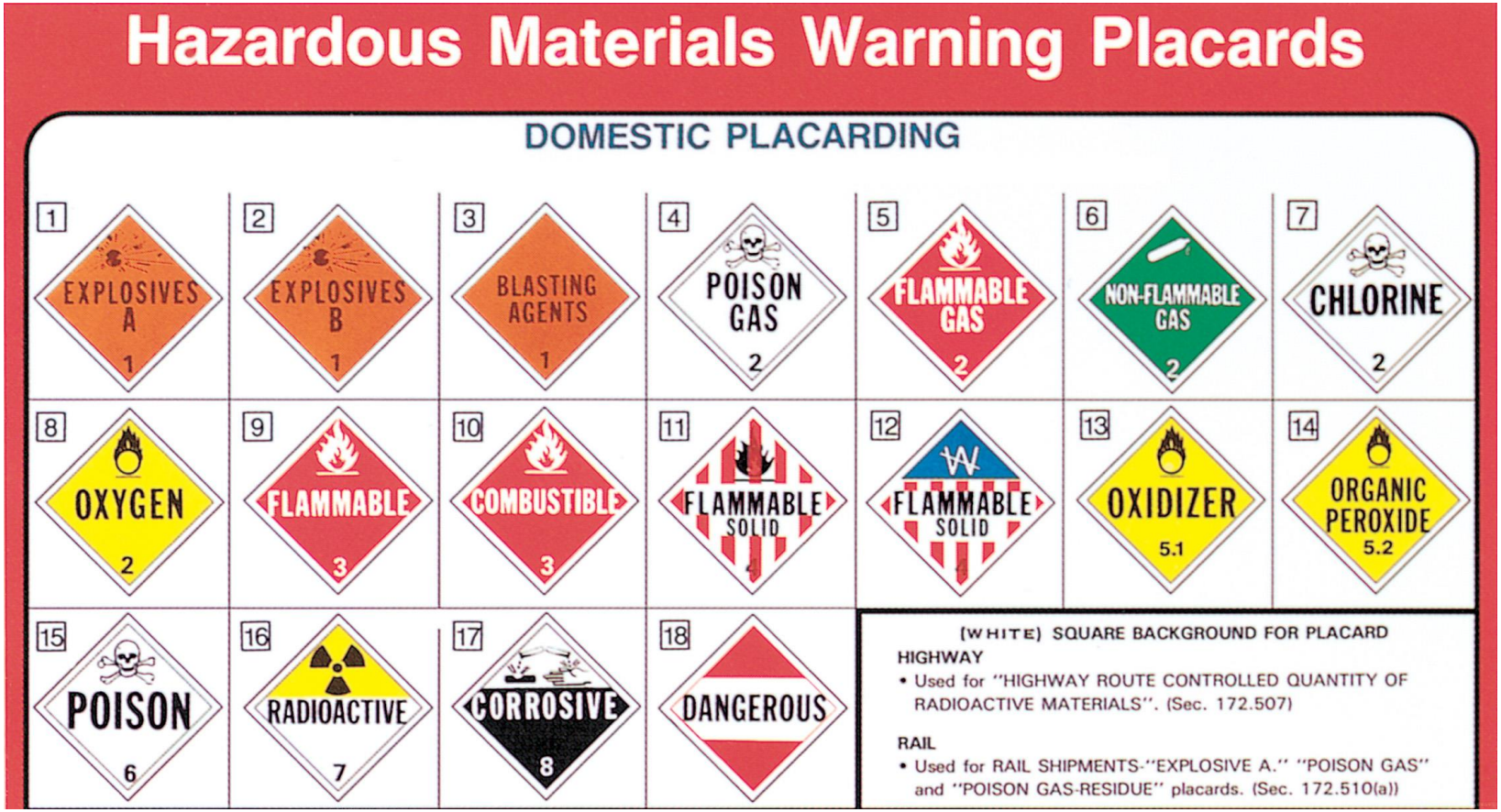
Examples of Hazardous Materials Warning Placards



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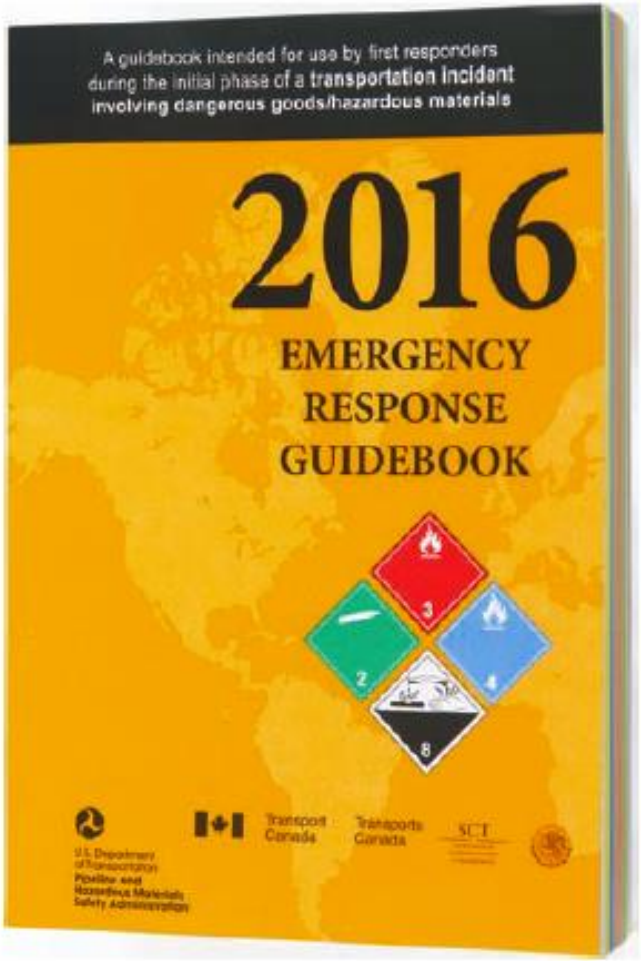
The Emergency Response Guidebook Should be Carried on all EMS Vehicles



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Scene Safety (33 of 35)

- Protecting Yourself from Injury
  - Rescue situations
    - Hazards may include, but are not limited to:
      - Downed power lines
      - Fire or threat of fire
      - Explosion or threat of explosion
      - Hazardous materials
      - Low oxygen environments

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Downed Power Lines Pose a Potential Life Threat for Patients and Rescuers

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Downed Wires are Dangerous Even if no Fire or Sparks are Evident

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Use of ANSI/ISEA 107-2004 High Visibility Apparel Worn over Other Protective Gear

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Scene Safety (35 of 35)

- Protecting Yourself from Injury
  - Violence and crime
    - Violence can arise from patients, bystanders, family members, or perpetrators of a crime.
    - If you suspect the potential for violence, request law enforcement.
    - Do not enter an unsafe scene.

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EMTs are Often Endangered at Scenes of Crime and Violence

(a) A raid at a clandestine methane lab

(b) A warning note left by the victim of a chemical suicide.

(a)

(b)

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Wellness Principles (1 of 7)

- Physical Well-Being
  - Physical well-being is necessary to performing the job of an EMT.
  - Physical well-being includes:
    - Physical fitness
    - Adequate sleep
    - Injury prevention

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Wellness Principles (2 of 7)

- Physical Well-Being
  - Core components of physical fitness are:
    - Cardiovascular endurance
    - Muscle strength
    - Muscle endurance
    - Muscle flexibility
    - Body composition

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Wellness Principles (3 of 7)

- Physical Well-Being
  - Muscle strength
    - Required for the frequent, heavy lifting EMTs do
  - Muscle endurance
    - Ability of muscle to function over time without fatigue

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Wellness Principles (5 of 7)

- Physical Well-Being
  - Adequate sleep
    - Obtain eight to ten hours of sleep each day.
    - Working shifts that conflict with the body's natural rhythms can create physical, mental, and social difficulties.
    - Techniques exist for improving the quality of sleep.

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Wellness Principles (6 of 7)

- Physical Well-Being
  - Smoking cessation
  - Alcohol and drug-related issues

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Wellness Principles (7 of 7)

- Mental Well-Being
  - Stress associated with EMS can affect your mental well-being.
  - Over time, stress can lead to chronic physical illness and emotional issues.

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Lesson Summary (1 of 2)

- Dealing with death and dying is a regular part of EMTs' jobs.
- Five stages of grief exist, and the patient may be in any one of them.
- Take measures to manage job stress.
- Recognize signs and symptoms of stress reactions.

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Lesson Summary (2 of 2)

- Be aware of the risks associated with emergency response.
- Use Standard Precautions for protection from communicable disease.
- Assess all scenes for potential hazards and make sure they have been addressed before entering the scene.

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