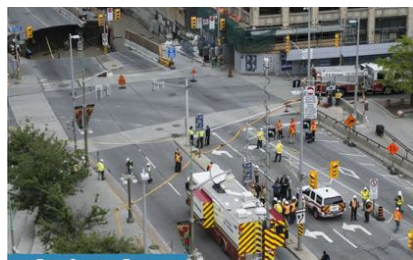


# Emergency Medical Responder: A Skills Approach

Fifth Canadian Edition



FIFTH CANADIAN EDITION

## EMERGENCY MEDICAL RESPONDER

A SKILLS APPROACH

MEETS PARAMEDIC ASSOCIATION OF CANADA'S  
NATIONAL OCCUPATIONAL COMPETENCY PROFILE

Pearson

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## Chapter 10

### Scene Assessment

## Objectives

- List the three components of scene assessment.
- Describe common hazards found at medical or trauma scenes.
- Explain how a patient's presentation affects your evaluation of the mechanism of injury or the nature of the illness.
- Discuss the four common mechanisms of injury.
- Discuss the reason for identifying the total number of patients at the scene.

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## Personal Protective Equipment

- Gloves
- Eye protection
- Mask
- Gown

## Planning

- Wear safe clothing
- Prepare equipment properly
- Carry a portable radio
- Plan safety roles

## Figure 10–1a Plan for the Possibility of a Dangerous Scene



**Figure 10–1a** Plan for the possibility of a dangerous scene.

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## Observe

- Violence
- Weapons of any kind
- Signs of drug use
- Anything unusual



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## Figure 10–1b Observe the Scene for Signs of Potential Danger



**Figure 10–1b** Observe the scene for signs of potential danger.

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## React

- Retreat
- Radio
- Re-evaluate



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## Figure 10–1c React to Danger Appropriately— Retreat, Radio, and Re-Evaluate



**Figure 10–1c** React to danger appropriately—  
retreat, radio, and re-evaluate.

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## Kinematics of Trauma:



**Figure 10–2a** Impact 1—the vehicle strikes an object.

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## Kinematics of Trauma

- The science of analyzing the mechanism of injury
  - Kinetic Energy: The total amount of energy contained by an object in motion
  - Velocity: Speed at which an object moves

## When Caring for a Trauma Patient, Take Note Of

- The body position at the time of impact
- The part of the body that first impacted a surface
- The surface the body landed on
- The object that penetrated the body
- The distance involved, if any

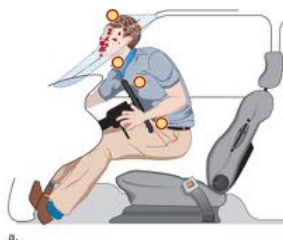
## Common Mechanisms of Injury

- Motor vehicle crashes (MVA/MVCs)
- Falls
- Penetrating objects
- Explosions

## Five Basic Types of MVAs (MVCs)

- Head-on impact
- Rear impact
- Side impact
- Rotational impact
- Rollover

## Head-On Impact



**Figure 10-4** In a head-on impact, the patient is forced either (a) up and over or (b) down and under.

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## Rear Impact



**Figure 10-6** A rear impact forces the patient (a) backward and then (b) forward.

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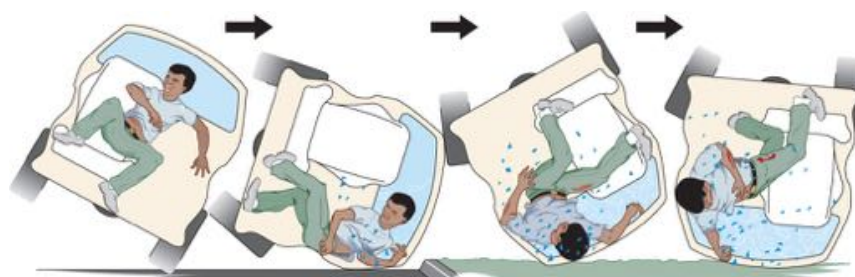


## Side Impact

- Also called broadside or T-bone collision.
- Expect the following types of injuries
  - Head and neck injuries
  - Chest injuries
  - Pelvic injuries

**Note:** *If there is more than one person sitting on a seat, heads often collide.*

## Rollover Impact



**Figure 10-8** In a rollover, the occupant changes direction every time the car does.

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## ATV Crashes

- Expect the following types of injuries:
  - Head injuries
  - Neck injuries
  - Extremity injuries

**Note:** Rollovers are common.

## Snowmobile Crashes

- Expect the following types of injuries:
  - Severe head and neck injuries
  - Femur and pelvic fractures

**Note:** Rollovers are common.

## Fall Injuries

- **A fall** is the most common mechanism of injury
- The severity of the injury depends on
  - Distance of the fall
  - Anything that interrupts the fall
  - Body part that first impacts
  - Surface on which the victim lands

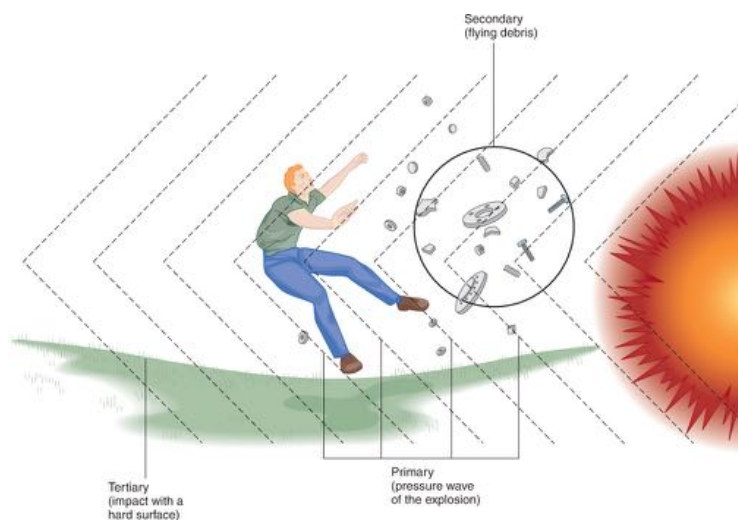
## Penetrating Trauma

Low-Velocity Injuries	Medium- and High-Velocity Injuries
Knives Arrows	Bullets from a handgun or rifle

## The Most Common Explosions Involve

- Natural gas
- Gasoline
- Fireworks
- Grain Elevators

## Explosion Injuries Have a Typical Pattern



**Figure 10-11** Phases of a blast injury.

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## Resource Determination

You may need help if

- there are more patients than you can deal with (as in an MCI)
- hazardous materials complicate emergency
- law enforcement is needed to deal with violence or potential violence