



Disaster Preparedness

CERT Basic Training Unit 1



Setting the Stage



CERT Basic Training
Unit 1: Disaster Preparedness

1-1



Course Preview

- Fire safety
- Disaster medical operations
- Light search and rescue
- CERT organization
- Disaster psychology
- CERT and terrorism



FEMA

CERT Basic Training
Unit 1: Disaster Preparedness

1-2



Unit Objectives

- Identify roles and responsibilities for community preparedness
- Describe types of hazards that affect community, people, health, and infrastructure
- Undertake personal and organizational preparedness actions
- Describe functions of CERTs



FEMA

CERT Basic Training
Unit 1: Disaster Preparedness

1-3



Community Preparedness: Roles and Responsibilities

- Key priority in lessening the impact of disasters
- Critical that all community members take steps to prepare
- Effective when addresses unique attributes of community and engages whole community



FEMA

CERT Basic Training
Unit 1: Disaster Preparedness

1-4



Government

- Government has responsibility to:
 - Develop, test, and refine emergency plans
 - Ensure emergency responders have adequate skills and resources
 - Provide services to protect and assist citizens



FEMA

CERT Basic Training
Unit 1: Disaster Preparedness

1-5



Emergency Operations Plan

- Assigns responsibility to organizations and individuals
- Sets forth lines of authority
- Describes how people and property will be protected
- Identifies personnel, equipment, facilities, supplies, and other resources



FEMA

CERT Basic Training
Unit 1: Disaster Preparedness

1-6



Community Leaders

- Have a responsibility to participate in community preparedness
 - Participate on local collaborative planning council
 - Identify and integrate appropriate resources into government plans
 - Ensure that facilities, staff, and customers served are prepared



FEMA

CERT Basic Training
Unit 1: Disaster Preparedness

1-7



The Public

- Learn about community alerts, warnings, and evacuation routes
- Take training
- Practice skills and personal plans
- Network and help others
- Give feedback to community
- Report suspicious activity
- Volunteer



FEMA

CERT Basic Training
Unit 1: Disaster Preparedness

1-8



Engaging the Whole Community

- Goal of Citizen Corps is to make communities safer, more prepared, and more resilient
- Citizen Corps Councils bring government and community leaders together
- Councils ensure emergency plans more effectively reflect the community



FEMA

CERT Basic Training
Unit 1: Disaster Preparedness

1-9



Types of Disaster

- Natural
- Technological
- Intentional



CERT Basic Training
Unit 1: Disaster Preparedness

1-10



Key Disaster Elements

- They are relatively unexpected
- Emergency personnel may be overwhelmed
- Lives, health, and the environment are endangered



CERT Basic Training
Unit 1: Disaster Preparedness

1-11



Local Hazard Vulnerability

- Identify most common disasters that occur
- Identify possible hazards with most severe impact
- Consider recent or historical impacts
- Identify susceptible locations in the community for specific hazards
- Consider what to expect from disruption of services



FEMA

CERT Basic Training
Unit 1: Disaster Preparedness

1-12



Results of Damage to Infrastructure

- Police: address incidences of grave public safety
- Firefighters: suppress major fires
- EMS personnel: handle life-threatening injuries
- Lower priority needs met in other ways



FEMA

CERT Basic Training
Unit 1: Disaster Preparedness

1-13



Hazards Related to Structure Type

- You may not have opportunity to select type of structure when a disaster occurs
- Engineered buildings have performed well in most types of disasters
- Types of damage vary by structure
- Differences in hazards and mitigation between single-family homes and multiple-unit dwellings



FEMA

CERT Basic Training
Unit 1: Disaster Preparedness

1-14



Hazards from Home Fixtures

- Gas line ruptures
 - Displaced water heaters or ranges
- Damage
 - From falling books, dishes, other cabinet contents
- Electric shock or injury
 - From displaced appliances, office equipment
- Fire
 - From faulty wiring, overloaded plugs, or frayed electric cords



FEMA

CERT Basic Training
Unit 1: Disaster Preparedness

1-15



Home and Workplace Preparedness



FEMA

CERT Basic Training
Unit 1: Disaster Preparedness

1-16



Preparing for a Disaster

- Know local hazards, alerts, warning systems, evacuation routes, and sheltering plans
- Consider important elements of disaster preparedness
- Address specific needs for yourself and people you know



FEMA

CERT Basic Training
Unit 1: Disaster Preparedness

1-17



Protective Actions

- Assess situation
- Decide to stay or change locations
 - Critical early decision in disasters
- Seek clean air and protect breathing passages
- Protect from debris and signal if trapped
- Remove contaminants
- Practice good hygiene



FEMA

CERT Basic Training
Unit 1: Disaster Preparedness

1-18



Sheltering

- Shelter in place: sealing a room
 - Identify internal room
 - Stay for several hours
 - Store supplies
- Shelter for extended stay
 - Stay for several days or up to 2 weeks
 - Store emergency supplies
- Mass care or community shelter
 - Take 3-day disaster kits
 - Shelters provide most supplies



FEMA

CERT Basic Training
Unit 1: Disaster Preparedness

1-19



Develop a Disaster Plan

- Where will you meet family members?
- Who is your out-of-State “check-in” contact?
- Will you have an extended stay? Shelter in place? Evacuate?
- How will you escape your home? Workplace? School? Place of worship?
- What route (and several alternates) will you use to evacuate your neighborhood?
- Do you have transportation?
- Did you practice your plan?



FEMA

CERT Basic Training
Unit 1: Disaster Preparedness

1-20



Escape Planning

- Consider needs of children and individuals with disabilities
- Inform all family members or office coworkers of the plan
- Run practice escape drills



FEMA

CERT Basic Training
Unit 1: Disaster Preparedness

1-21



Preparing for a Disaster

- Mitigation is the reduction of loss of life and property by lessening the impact of disasters
 - Any activity that prevents an emergency or reduces effects of hazards
- CERT members should have adequate homeowners coverage
 - Add flood insurance if in a flood hazard area



FEMA

CERT Basic Training
Unit 1: Disaster Preparedness

1-22



Non-structural Hazard Mitigation

- Anchor heavy furniture
- Secure appliances and office equipment
- Install hurricane storm shutters
- Childproof cabinet doors
- Locate and label gas, electricity, and water shutoffs
- Secure water heaters and have flexible gas lines installed



FEMA

CERT Basic Training
Unit 1: Disaster Preparedness

1-23



Other Mitigation Measures

- Bolt houses to foundations
- Install trusses or hurricane straps to reinforce roof
- Strap propane tanks and chimneys
- Strap mobile homes to their slabs
- Raise utilities
- Build a safe room



CERT Basic Training
Unit 1: Disaster Preparedness

1-24



Fortifying Your Home

- Different non-structural hazards to fortify against:
 - Home fires
 - Landslides or mudslides
 - Wildfires



CERT Basic Training
Unit 1: Disaster Preparedness

1-25



Get Involved

- Preparedness requires active participation from all
 - Talk to friends and family about hazards
 - Ask about emergency planning outside the home
 - Make sure those in charge have a plan
- Training provides skills needed to help others and keep skills current
 - CERT program provides training, practice, and connection to others
 - Participate in drills and exercises
 - Talk to friends and family about volunteering



FEMA

CERT Basic Training
Unit 1: Disaster Preparedness

1-26



CERT Disaster Response

- Respond in period immediately after a disaster
- Assist emergency response personnel when requested
- CERT members' first responsibility is personal and family safety
- Respond after a disaster:
 - Locate and turn off utilities, if safe
 - Extinguish small fires
 - Treat injuries
 - Conduct light search and rescue
 - Help to relieve survivor stress



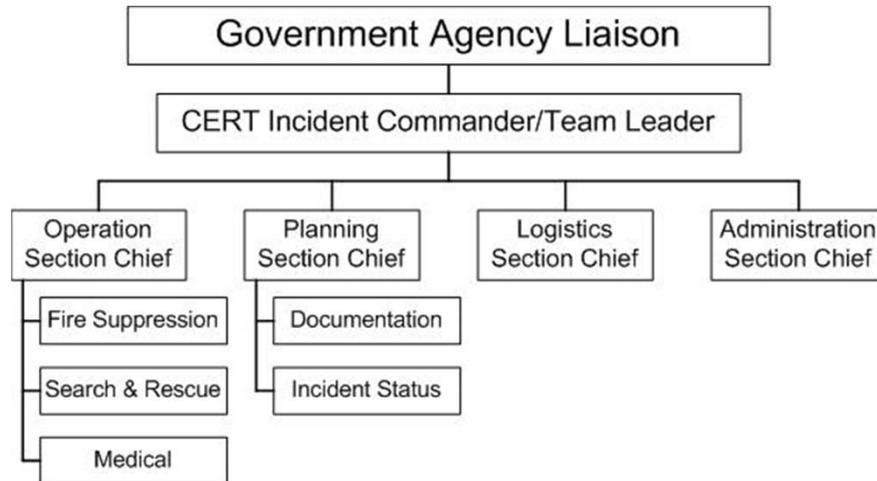
FEMA

CERT Basic Training
Unit 1: Disaster Preparedness

1-27



CERT Organization



FEMA

CERT Basic Training
Unit 1: Disaster Preparedness

1-28



Personal Protective Equipment

- Helmet
- Goggles
- N95 Mask
- Gloves (work and non-latex)
- Sturdy shoes or work boots



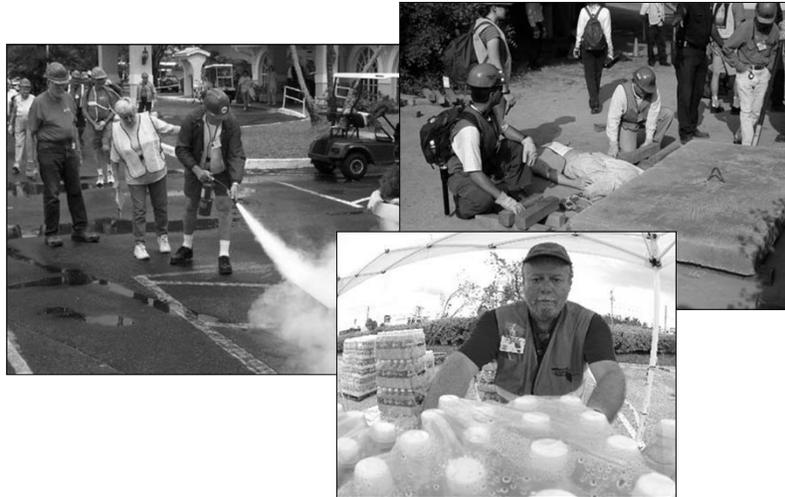
FEMA

CERT Basic Training
Unit 1: Disaster Preparedness

1-29



CERT in Action



FEMA

CERT Basic Training
Unit 1: Disaster Preparedness

1-30



Non-Disaster Roles

- Identify and aid neighbors/coworkers who might need assistance
- Distribute preparedness materials; do demos
- Staff first aid booths at special events
- Assist with installation of smoke alarms
- Parade route management



FEMA

CERT Basic Training
Unit 1: Disaster Preparedness

1-31



Protection for Disaster Workers

- CERT members generally protected by:
 - “Good Samaritan” laws
 - Volunteer Protection Act of 1997
 - Relevant State statutes



CERT Basic Training
Unit 1: Disaster Preparedness

1-32



Additional Training for CERTs

- Advanced first aid
- Animal issues in disasters
- Automated External Defibrillator (AED) use
- Community relations
- CPR skills
- Debris removal
- Donations management
- Shelter management
- Special needs concerns
- Traffic/crowd control
- Utilities control
- Online courses



CERT Basic Training
Unit 1: Disaster Preparedness

1-33



Unit Summary

- You should now be able to:
 - Identify roles and responsibilities for community preparedness
 - Describe types of hazards that affect community, people, health, and infrastructure
 - Undertake personal and organizational preparedness actions
 - Describe functions of CERTs



FEMA

CERT Basic Training
Unit 1: Disaster Preparedness

1-34



Homework Assignment

1. Review detailed information for Unit 1
2. Read unit to be covered in next session
3. Bring necessary supplies and wear appropriate clothes for next session
4. Discuss preparedness with family and friends
5. Assemble supplies in multiple locations
6. Examine homes for hazards



FEMA

CERT Basic Training
Unit 1: Disaster Preparedness

1-35





Fire Safety and Utility Controls

CERT Basic Training Unit 2



Unit Objectives

- Explain role of CERTs in fire safety
- Identify and reduce potential fire and utility risks
- Describe CERT sizeup process
- Conduct basic sizeup for a fire emergency
- Explain basic safety precautions
- Identify hazardous materials
- Extinguish small fires using a fire extinguisher



Unit Topics

- Fire chemistry
- Fire and utility hazards in the home, workplace, and neighborhood
- CERT sizeup
- Fire sizeup considerations
- Firefighting resources
- Fire suppression safety
- Hazardous materials



FEMA

CERT Basic Training
Unit 2: Fire Safety and Utility Controls

2-2



Role of CERTs

- CERTs play very important role in fire safety by:
 - Extinguishing small fires
 - Preventing additional fires by removing fuel sources
 - Shutting off utilities
 - Assisting with evacuations, when necessary



FEMA

CERT Basic Training
Unit 2: Fire Safety and Utility Controls

2-3



CERT Priorities

- Help in emergencies before professional responders arrive
- Rescuer safety is number one priority
 - Always work with a buddy
 - Always wear safety equipment

CERT Goal:
**Do the greatest good for
the greatest number**



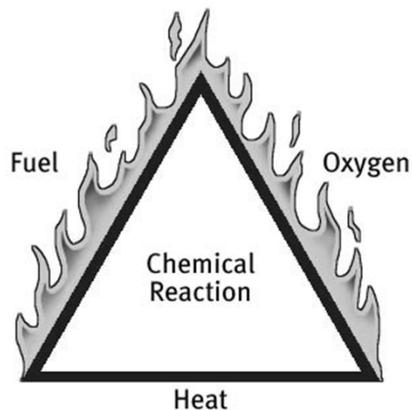
CERT Basic Training
Unit 2: Fire Safety and Utility Controls

2-4



The Fire Triangle

- Heat
- Fuel
- Oxygen



CERT Basic Training
Unit 2: Fire Safety and Utility Controls

2-5



5 Classes of Fire

- A: Ordinary combustibles
- B: Flammable and combustible liquids
- C: Energized electrical equipment
- D: Combustible metals
- K: Cooking oils



FEMA

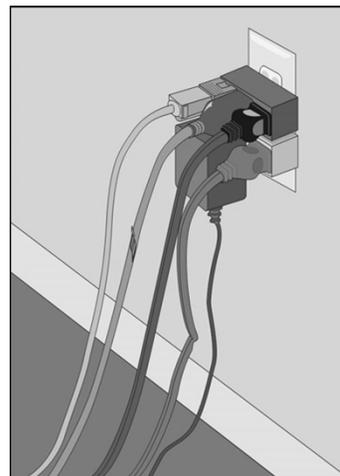
CERT Basic Training
Unit 2: Fire Safety and Utility Controls

2-6



Reducing Electrical Hazards

- Avoid the “electrical octopus”
- Don’t run cords under carpets
- Check for and replace broken or frayed cords
- Maintain appliances



FEMA

CERT Basic Training
Unit 2: Fire Safety and Utility Controls

2-7



Electrical Emergencies

- Know where power shutoffs are for:
 - Appliances
 - Circuit breakers
 - Fuses
- Post shutoff directions next to all utilities
- Know procedures for turning power back on



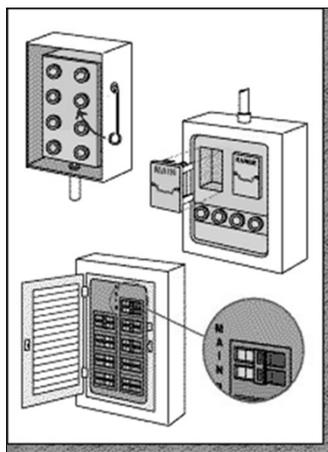
FEMA

CERT Basic Training
Unit 2: Fire Safety and Utility Controls

2-8



Shutoff Procedures



- Fuse box with shutoff
- Circuit box with shutoff



FEMA

CERT Basic Training
Unit 2: Fire Safety and Utility Controls

2-9



Natural Gas Hazards

- Asphyxiant
 - Robs body of oxygen
- Explosive
 - Can easily ignite



CERT Basic Training
Unit 2: Fire Safety and Utility Controls

2-10



Natural Gas Hazard Awareness

- Install natural gas detector
- Install carbon monoxide detector in home
- Test batteries for natural gas and carbon monoxide detectors every month
 - Change batteries every 6 months
- Locate and label gas shutoffs
 - Have proper non-sparking tool



CERT Basic Training
Unit 2: Fire Safety and Utility Controls

2-11



Gas Shutoff

- Locate and label gas shutoff valves
- If not automatic, know procedures for shutting off gas



FEMA

CERT Basic Training
Unit 2: Fire Safety and Utility Controls

2-12



L.I.E.S.

- Always read labels
- Use L.I.E.S. storage procedures (Limit, Isolate, Eliminate, Separate)



FEMA

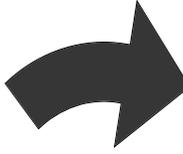
CERT Basic Training
Unit 2: Fire Safety and Utility Controls

2-13

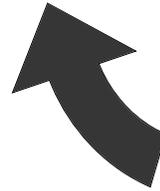


CERT Sizeup

1. Gather Facts
2. Assess Damage
3. Consider Probabilities
4. Assess Your Situation
5. Establish Priorities
6. Make Decisions
7. Develop Plan of Action
8. Take Action
9. Evaluate Progress



**REMEMBER:
CERT SIZEUP IS A
CONTINUAL
PROCESS**



FEMA

CERT Basic Training
Unit 2: Fire Safety and Utility Controls

2-14



CERT Fire Sizeup

- Helps responders decide:
 - Whether to attempt to suppress a fire
 - A plan of action
- Answers these questions:
 - Do my buddy and I have the right equipment?
 - Are there other hazards?
 - Is the building structurally damaged?
 - Can my buddy and I escape?
 - Can my buddy and I fight the fire safely?

**Remember: The safety of individual
CERT members is always the top priority**



FEMA

CERT Basic Training
Unit 2: Fire Safety and Utility Controls

2-15



Firefighting Resources

- Portable fire extinguishers
- Wet standpipes
- Confinement
- “Creative” resources



CERT Basic Training
Unit 2: Fire Safety and Utility Controls

2-16



Fire Extinguishers

- Water
- Dry chemical
- Carbon dioxide
- Specialized fire extinguisher



CERT Basic Training
Unit 2: Fire Safety and Utility Controls

2-17



Extinguisher Rating/Labeling

- Labels show types of fires that extinguisher is used for:
 - Class A fire ratings: 1A to 40A
 - Class B fire ratings: 1B to 640B
- Higher number on label = greater amount of extinguishing agent

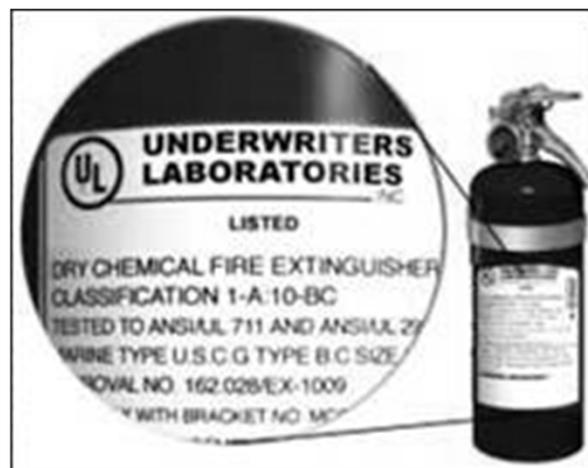


CERT Basic Training
Unit 2: Fire Safety and Utility Controls

2-18



Examples of Labels

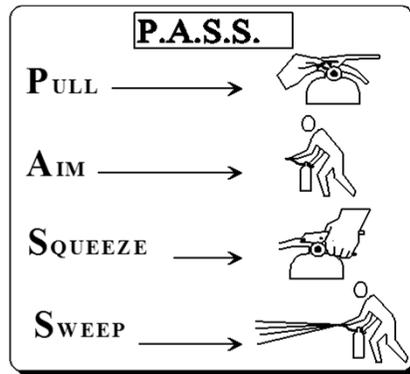


CERT Basic Training
Unit 2: Fire Safety and Utility Controls

2-19



P.A.S.S.



Test the extinguisher after pulling the pin



FEMA

CERT Basic Training
Unit 2: Fire Safety and Utility Controls

2-20



Interior Wet Standpipes

- Usually in commercial buildings or apartments
- Work in two-person teams when using wet standpipes



FEMA

CERT Basic Training
Unit 2: Fire Safety and Utility Controls

2-21



Fire Suppression Safety

Safety of individual CERT members is top priority



CERT Basic Training
Unit 2: Fire Safety and Utility Controls

2-22



Fire Suppression Don'ts

- Don't get too close
- Don't try to fight a fire alone
- Don't try to suppress large fires
- Don't enter smoke-filled areas



CERT Basic Training
Unit 2: Fire Safety and Utility Controls

2-23



Hazardous Materials

- Corrode other materials
- Explode or are easily ignited
- React strongly with water
- Are unstable when exposed to heat or shock
- Are otherwise toxic to humans, animals, or the environment through absorption, inhalation, injection, or ingestion



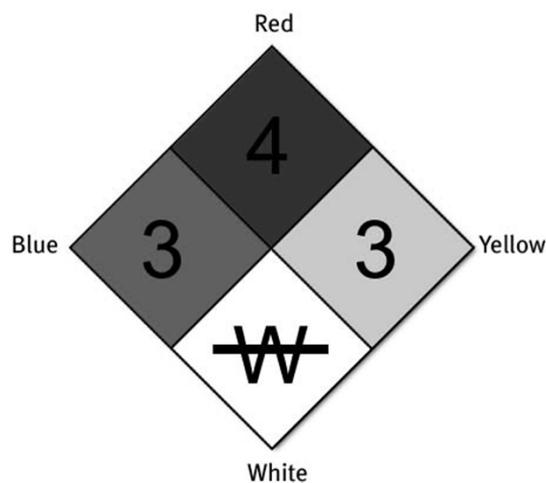
FEMA

CERT Basic Training
Unit 2: Fire Safety and Utility Controls

2-24



Identifying Stored Hazmats



FEMA

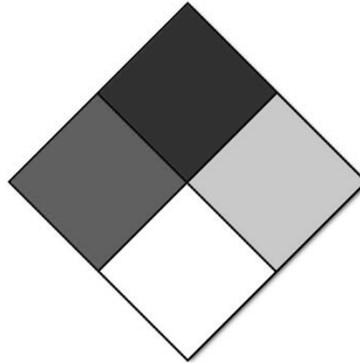
CERT Basic Training
Unit 2: Fire Safety and Utility Controls

2-25



The White Quadrant

- NFPA 704 Diamond
White Quadrant:
 - ~~W~~: Shows unusual reactivity with water
 - OX: Possesses oxidizing properties



FEMA

CERT Basic Training
Unit 2: Fire Safety and Utility Controls

2-26



STOP!



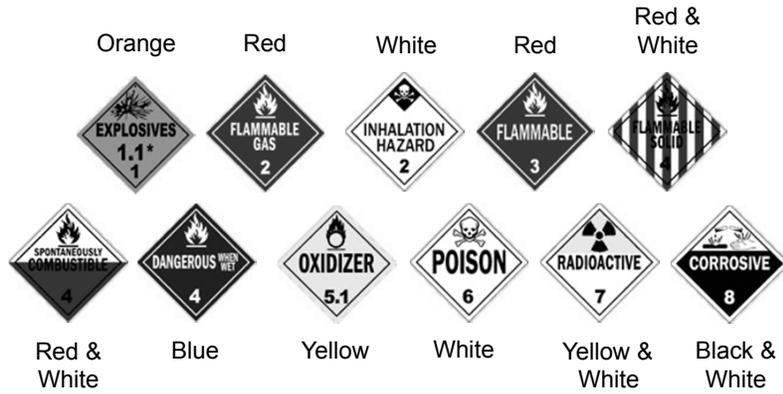
FEMA

CERT Basic Training
Unit 2: Fire Safety and Utility Controls

2-27



Hazmats in Transit

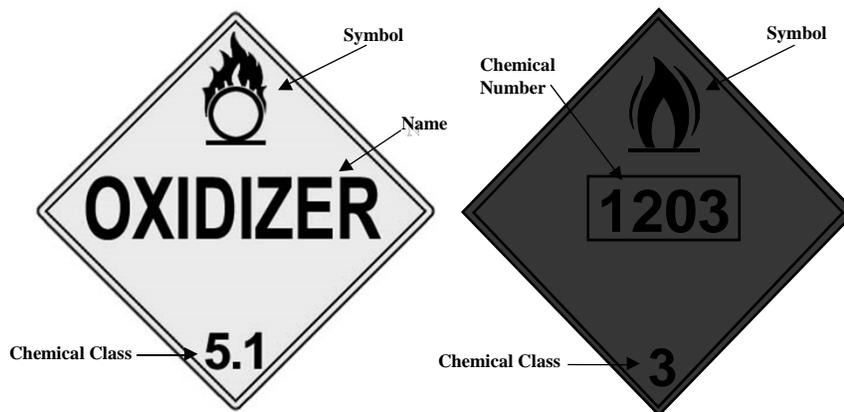


CERT Basic Training
Unit 2: Fire Safety and Utility Controls

2-28



UN and NA Placards



CERT Basic Training
Unit 2: Fire Safety and Utility Controls

2-29



Greater Than 1?



Remember!
All hazardous material placards are
a stop sign for CERTs



FEMA

CERT Basic Training Unit 2: Fire Safety
and Utility Controls

2-30



Unit Summary

- You should know:
 - Keys to effective fire suppression
 - CERT sizeup and fire sizeup considerations
 - Classes of fire and types of fire extinguishers
 - P.A.S.S.
 - How to identify hazardous materials

**Always follow the safety rules established for
CERTs – personal safety comes first!**



FEMA

CERT Basic Training
Unit 2: Fire Safety and Utility Controls

2-31



Homework Assignment

1. Read unit to be covered in next session
2. Bring necessary supplies to next session
3. Wear appropriate clothes to next session



CERT Basic Training
Unit 2: Fire Safety and Utility Controls

2-32





Disaster Medical Operations — Part 1

CERT Basic Training Unit 3



Assumptions

- Need for CERT members to learn disaster medical operations is based on two assumptions:
 - Number of victims could exceed local capacity for treatment
 - Survivors will assist others
 - They will do whatever they know how to do
 - They need to know lifesaving first aid or post-disaster survival techniques



Importance of Quick Action

- Phase 1: Death within minutes, result of severe trauma
- Phase 2: Death within several hours, result of excessive bleeding
- Phase 3: Death in several days or weeks, result of infection



CERT Training

- Treatment for life-threatening conditions
 - Airway obstruction, bleeding, shock
- Treatment for other, less urgent conditions

*Provide greatest good for greatest number
by conducting simple triage
and rapid treatment*



START

- S**T**art = Simple Triage
 - Victims sorted based on priority of treatment
- s**t**ART = And Rapid Treatment
 - Rapid treatment of injuries assessed and prioritized in first phase



Unit Objectives

- Identify “killers”
- Apply techniques for opening airway, controlling bleeding, and treating for shock
- Conduct triage under simulated disaster conditions



Unit Topics

- Treating life threatening injuries
- Triage



CERT Basic Training
Unit 3: Disaster Medical Operations — Part 1

3-6



Three “Killers”

- Emergency medicine “killers”
 - Airway obstruction
 - Bleeding
 - Shock
- First priority of medical operations:
 - Open airway
 - Control excessive bleeding
 - Treat for shock



CERT Basic Training
Unit 3: Disaster Medical Operations — Part 1

3-7



How to Approach a Victim

- Be sure victim can see you
- Identify yourself
 - Your name and name of your organization
- Request permission to treat, if possible
- Respect cultural differences

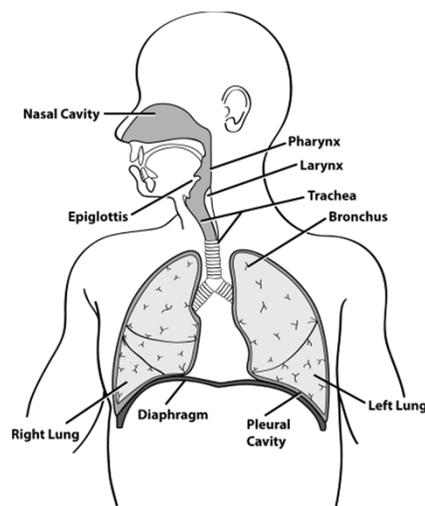


CERT Basic Training
Unit 3: Disaster Medical Operations — Part 1

3-8



Open the Airway

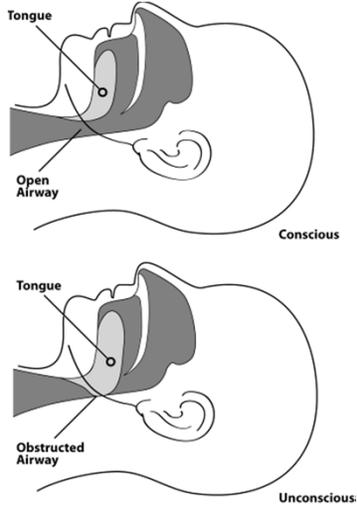


CERT Basic Training
Unit 3: Disaster Medical Operations — Part 1

3-9



Open vs. Obstructed Airway



CERT Basic Training
Unit 3: Disaster Medical Operations — Part 1

3-10



Head-Tilt/Chin-Lift Method



CERT Basic Training
Unit 3: Disaster Medical Operations — Part 1

3-11



Types of Bleeding - 1

- Arterial bleeding
 - Bleeding from artery spurts
- Venous bleeding
 - Bleeding from vein flows
- Capillary bleeding
 - Bleeding from capillaries oozes

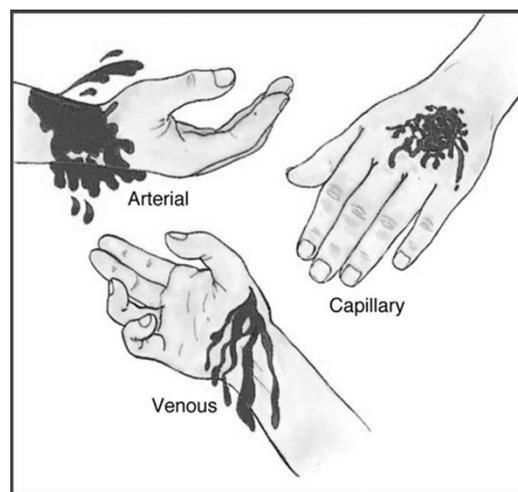


CERT Basic Training
Unit 3: Disaster Medical Operations — Part 1

3-12



Types of Bleeding - 2



CERT Basic Training
Unit 3: Disaster Medical Operations — Part 1

3-13

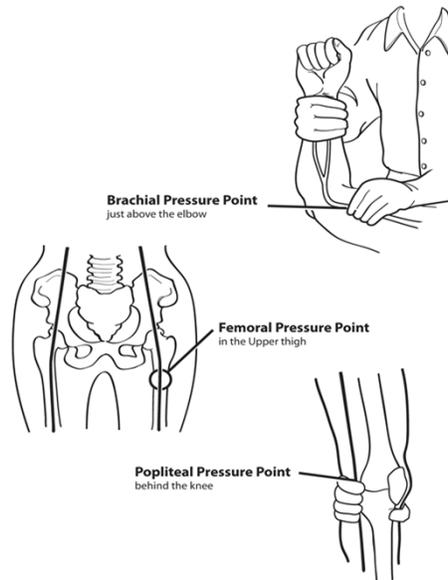


Control Bleeding

- 3 main methods for controlling bleeding:
 - Direct pressure
 - Elevation
 - Pressure points



Pressure Points



Shock

- Result of ineffective circulation of blood
- Remaining in shock will lead to death of:
 - Cells
 - Tissues
 - Entire organs



CERT Basic Training
Unit 3: Disaster Medical Operations — Part 1

3-16



Recognizing Shock

- Main signs of shock
 - Rapid and shallow breathing
 - Capillary refill of greater than 2 seconds
 - Failure to follow simple commands, such as “Squeeze my hand”
- Symptoms of shock are easily missed... pay careful attention to your patient!



CERT Basic Training
Unit 3 Disaster Medical Operations — Part 1

3-17



Responding to Mass Casualty Event

- Have a plan
- Follow that plan
- Document your actions throughout



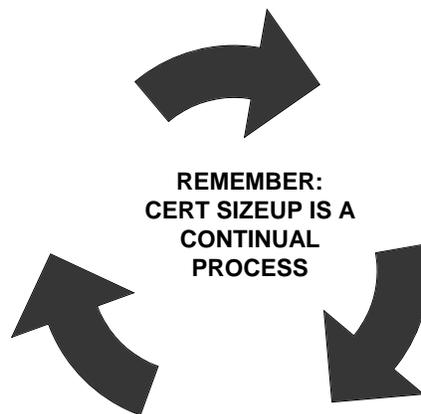
CERT Basic Training
Unit 3: Disaster Medical Operations — Part 1

3-18



CERT Sizeup

1. Gather Facts
2. Assess Damage
3. Consider Probabilities
4. Assess Your Situation
5. Establish Priorities
6. Make Decisions
7. Develop Plan of Action
8. Take Action
9. Evaluate Progress



CERT Basic Training
Unit 3: Disaster Medical Operations — Part 1

3-19



What Is Triage?

- Process for managing mass casualty event
 1. Victims are evaluated
 2. Victims are sorted by urgency of treatment needed
 3. Victims are set up for immediate or delayed treatment



Triage

- Immediate (I): Victim has life-threatening injuries (airway, bleeding, or shock)
- Delayed (D): Injuries do not jeopardize victim's life; treatment can be delayed
- Minor (M): Walking wounded and generally ambulatory
- Dead (DEAD): No respiration after two attempts to open airway



Rescuer Safety During Triage

- If hazmat or terrorist event is suspected, CERT members DO NOT respond
 - Evacuate as safely as possible
- ALWAYS wear PPE:
 - Helmet
 - Goggles
 - N95 mask
 - Work gloves
 - Sturdy shoes or boots
 - Non-latex exam gloves



Triage Process

- Step 1: Stop, Look, Listen, and Think
- Step 2: Conduct voice triage
- Step 3: Start where you stand; follow systematic route
- Step 4: Evaluate each victim and tag
- Step 5: Treat “I” victims immediately
- Step 6: Document triage results



Step 4: Triage Evaluation

- Check airway and breathing
- Check circulation and bleeding
- Check mental status



CERT Basic Training
Unit 3: Disaster Medical Operations — Part 1

3-24



Triage Pitfalls

- No team plan, organization, or goal
- Indecisive leadership
- Too much focus on one injury
- Treatment (rather than triage) performed



CERT Basic Training
Unit 3: Disaster Medical Operations — Part 1

3-25



Unit Summary

- You should now be able to:
 - Identify 3 “killers”
 - Apply techniques for opening the airway, controlling bleeding, and treating for shock
 - Conduct triage under simulated disaster conditions



CERT Basic Training
Unit 3: Disaster Medical Operations — Part 1

3-26



Homework Assignment

1. Read unit to be covered in next session
2. Bring necessary supplies for the next session
3. Wear appropriate clothes for the next session



CERT Basic Training
Unit 3: Disaster Medical Operations — Part 1

3-27





Disaster Medical Operations — Part 2

CERT Basic Training Unit 4



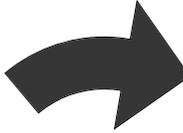
Unit 3 Review

- 3 “Killers”
 - Airway obstruction
 - Excessive bleeding
 - Shock



CERT Sizeup

1. Gather Facts
2. Assess Damage
3. Consider Probabilities
4. Assess Your Situation
5. Establish Priorities
6. Make Decisions
7. Develop Plan of Action
8. Take Action
9. Evaluate Progress



**REMEMBER:
CERT SIZEUP IS A
CONTINUAL
PROCESS**



FEMA

CERT Basic Training
Unit 4: Disaster Medical Operations – Part 2

4-2



Unit Objectives

- Take appropriate sanitation measures to help protect public health
- Perform head-to-toe patient assessments
- Establish a treatment area
- Apply splints to suspected fractures and sprains
- Employ basic treatments for other injuries



FEMA

CERT Basic Training
Unit 4: Disaster Medical Operations – Part 2

4-3



Unit Topics

- Public Health Considerations
- Functions of Disaster Medical Operations
- Establishing Medical Treatment Areas
- Conducting Head-to-Toe Assessments
- Treating Burns
- Wound Care
- Treating Fractures, Dislocations, Sprains, and Strains
- Nasal Injuries
- Treating Cold-Related Injuries
- Treating Heat-Related Injuries
- Bites and Stings



FEMA

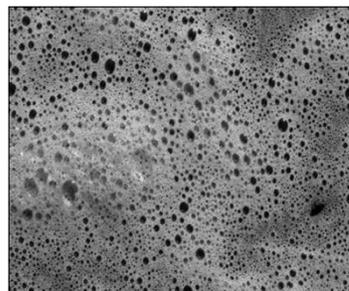
CERT Basic Training
Unit 4: Disaster Medical Operations – Part 2

4-4



Public Health Considerations

- Maintaining proper hygiene
- Maintaining proper sanitation
- Purifying water (if necessary)
- Preventing spread of disease



FEMA

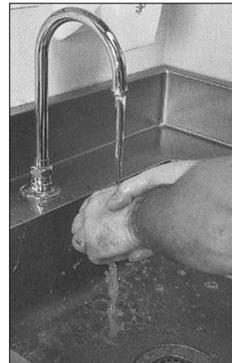
CERT Basic Training
Unit 4: Disaster Medical Operations – Part 2

4-5



Maintaining Hygiene

- Wash hands frequently
 - Or use alcohol-based hand sanitizer
- Wear non-latex exam gloves
- Wear N95 mask and goggles
- Keep dressings sterile
- Avoid contact with body fluids
 - “If it is warm, wet, and not yours, don’t touch it!”



CERT Basic Training
Unit 4: Disaster Medical Operations – Part 2

4-6



Maintain Sanitation

- Control disposal of bacterial sources
- Put waste products in plastic bags
 - Tie off bags and mark them as medical waste
- Bury human waste



CERT Basic Training
Unit 4: Disaster Medical Operations – Part 2

4-7



Water Sanitation Methods

- Boil water for 1 minute
- Water purification tablets
- Non-perfumed liquid bleach
 - 8 drops/gal of water
 - 16 drops/gal if water is cloudy
 - Let stand for 30 minutes before use



CERT Basic Training
Unit 4: Disaster Medical Operations – Part 2

4-8



Functions of Disaster Medical Operations

- Triage
- Treatment
- Transport
- Morgue
- Supply



CERT Basic Training
Unit 4: Disaster Medical Operations – Part 2

4-9



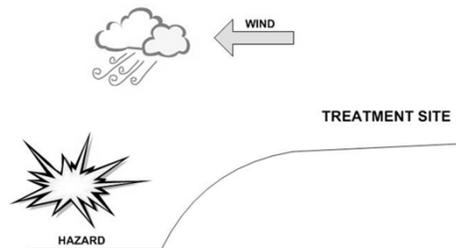
Establish a Medical Treatment Area

- Select site and set up treatment area as soon as injured victims are confirmed
- When determining best location(s) for treatment area, consider:
 - Safety of rescuers and victims
 - Most effective use of resources



Treatment Area Site Selection

- The site selected should be:
 - In a safe area, free of hazards and debris
 - Upwind, uphill, and upstream (if possible) from hazard zone(s)
 - Accessible by transportation vehicles
 - Expandable



The treatment site should be uphill and upwind from the hazard.



Most Effective Use of CERT Resources

- To help meet the challenge of limited resources, CERT may need to establish:
 - Decentralized medical treatment location (more than one location)
 - Centralized medical treatment location (one location)

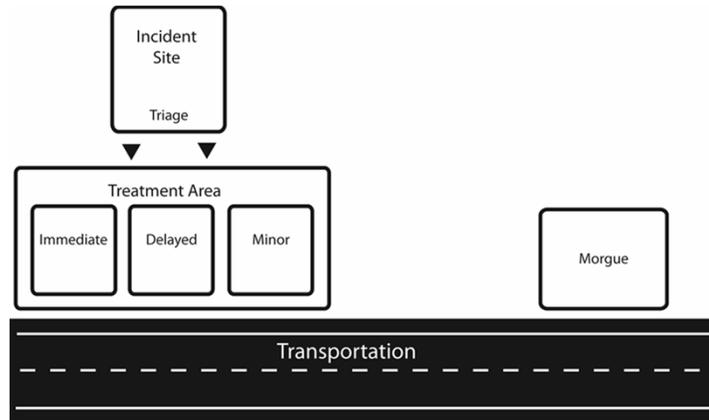


Treatment Area Layout

- Four treatment areas:
 - “I” for Immediate care
 - “D” for Delayed care
 - “M” for Minor injuries/walking wounded
 - “DEAD” for the morgue



Treatment Area Layout



Treatment area layout, showing the organization for the incident site, triage, transportation, and morgue



CERT Basic Training
Unit 4: Disaster Medical Operations – Part 2

4-14



Treatment Area Organization

- Assign treatment leader to each treatment area
- Document thoroughly
 - Available identifying information
 - Description (age, sex, body build, estimated height)
 - Clothing
 - Injuries
 - Treatment
 - Transfer location



CERT Basic Training
Unit 4: Disaster Medical Operations – Part 2

4-15



Head-to-Toe Assessment

- Objectives of head-to-toe assessment:
 - Determine extent of injuries
 - Determine type of treatment needed
 - Document injuries



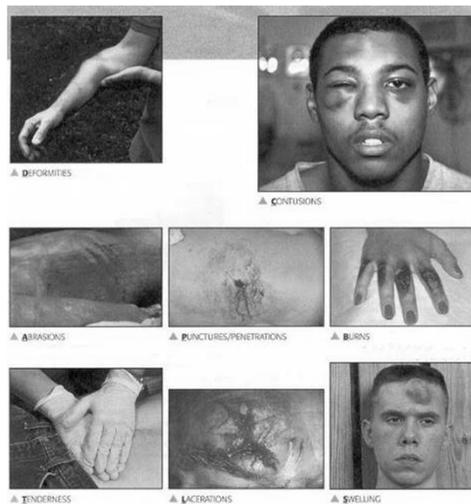
CERT Basic Training
Unit 4: Disaster Medical Operations – Part 2

4-16



DCAP-BTLS

- Deformities
- Contusions
- Abrasions
- Punctures
- Burns
- Tenderness
- Lacerations
- Swelling



CERT Basic Training
Unit 4: Disaster Medical Operations – Part 2

4-17



Where and When

- Light damage: assess in place
- Moderate damage: move to treatment area first
- Assess and tag everyone
- Both verbal and hands on



Conducting Head-to-Toe Assessment

- Pay careful attention
- Look, listen, and feel
- Check own hands for patient bleeding
- If you suspect a spinal injury in unconscious victims, treat accordingly
- Check PMS in all extremities
- Look for medical identification



Order of Assessment

1. Head
2. Neck
3. Shoulders
4. Chest
5. Arms
6. Abdomen
7. Pelvis
8. Legs



CERT Basic Training
Unit 4: Disaster Medical Operations – Part 2

4-20



Closed-Head, Neck, Spinal Injuries

- Do no harm
 - Minimize movement of head and neck
- Keep spine in straight line
- Stabilize head



CERT Basic Training
Unit 4: Disaster Medical Operations – Part 2

4-21



Treating Burns

- Conduct thorough sizeup
- Treat with first aid
 - Cool burned area
 - Cover with sterile cloth to reduce risk of infection



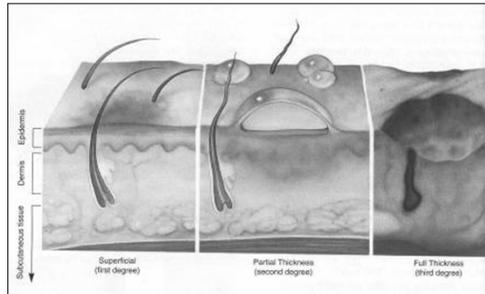
Burn Severity

- Factors that affect burn severity:
 - Temperature of burning agent
 - Period of time victim exposed
 - Area of body affected
 - Size of area burned
 - Depth of burn



Burn Classifications

- Superficial: epidermis
- Partial Thickness: dermis and epidermis
- Full Thickness: subcutaneous layer and all layers above



CERT Basic Training
Unit 4: Disaster Medical Operations – Part 2

4-24



Burn Treatment: DOs

- When treating a burn victim, DO:
 - Cool skin or clothing if they are still hot
 - Cover burn loosely with dry, sterile dressings to keep air out, reduce pain, and prevent infection
 - Elevate burned extremities



CERT Basic Training
Unit 4: Disaster Medical Operations – Part 2

4-25



Burn Treatment: DON'Ts

- When treating a burn victim, DO NOT:
 - Use ice
 - Apply antiseptics, ointments, or other remedies
 - Remove shreds of tissue, break blisters, or remove adhered particles of clothing



CERT Basic Training
Unit 4: Disaster Medical Operations – Part 2

4-26



Treatment for Chemical Burns

- Remove cause of burn + affected clothing/jewelry
- If irritant is dry, gently brush away as much as possible
 - Always brush away from eyes, victim, and you
- Flush with lots of cool running water
- Apply cool, wet compress to relieve pain
- Cover wound loosely with dry, sterile or clean dressing
- Treat for shock if appropriate



CERT Basic Training
Unit 4: Disaster Medical Operations – Part 2

4-27



Inhalation Burns Signs and Symptoms

- Sudden loss of consciousness
- Evidence of respiratory distress or upper airway obstruction
- Soot around mouth or nose
- Singed facial hair
- Burns around face or neck

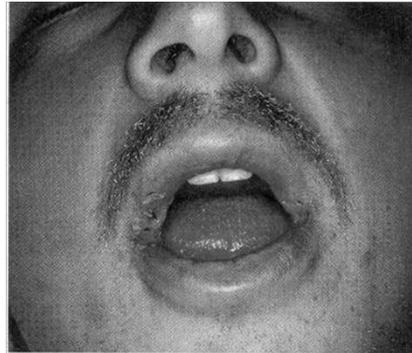


Figure 27-26 A singed mustache and burns to the tip of the tongue signal danger of airway burns or burns to the eyes.



CERT Basic Training
Unit 4: Disaster Medical Operations – Part 2

4-28



Wound Care

- Control bleeding
- Clean wound
- Apply dressing and bandage



CERT Basic Training
Unit 4: Disaster Medical Operations – Part 2

4-29



Cleaning and Bandaging Wounds

- Clean by irrigating with clean, room temperature water
 - NEVER use hydrogen peroxide
 - Irrigate but do not scrub
- Apply dressing and bandage
 - Dressing applied directly to wound
 - Bandage holds dressing in place



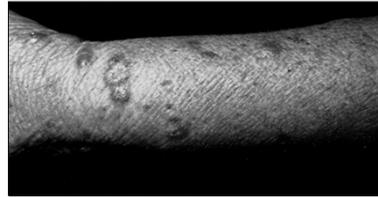
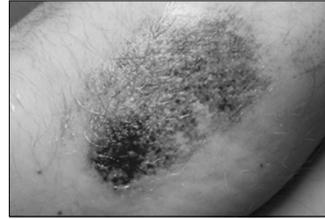
Rules of Dressing

- If active bleeding:
 - Redress OVER existing dressing
- If no active bleeding:
 - Remove bandage and dressing to flush wound
 - Check for infection every 4-6 hours



Signs of Infection

- Signs of possible infection
 - Swelling around wound site
 - Discoloration
 - Discharge from wound
 - Red striations from wound site



CERT Basic Training
Unit 4: Disaster Medical Operations – Part 2

4-32



Amputations

- Control bleeding; treat shock
- If amputated body part is found:
 - Save tissue parts, wrapped in clean material and placed in plastic bag
 - Keep tissue parts cool, but NOT directly on ice
 - Keep severed part with victim



CERT Basic Training
Unit 4: Disaster Medical Operations – Part 2

4-33



Impaled Objects

- When foreign object is impaled in patient's body:
 - Immobilize affected body part
 - Do not attempt to move or remove
 - Try to control bleeding at entrance wound
 - Clean and dress wound, making sure to stabilize impaled object

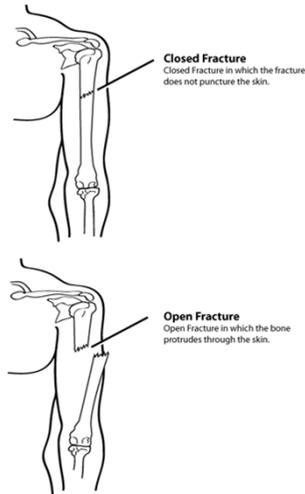


Fractures, Dislocations, Sprains, Strains

- Immobilize injury and joints immediately above and below injury site
- If uncertain of injury type, treat as fracture



Types of Fractures



CERT Basic Training
Unit 4: Disaster Medical Operations – Part 2

4-36



Treating Open Fractures

- Do not draw exposed bone ends back into tissue
- Do not irrigate wound
- Cover wound with sterile dressing
- Splint fracture without disturbing wound
- Place moist dressing over bone end

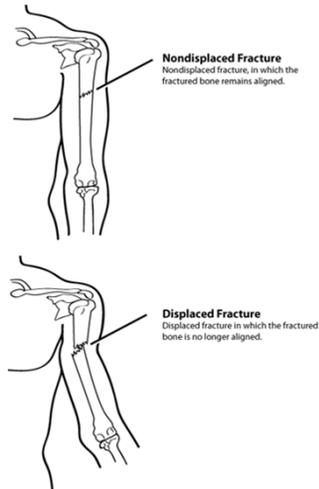


CERT Basic Training
Unit 4: Disaster Medical Operations – Part 2

4-37



Displaced and Nondisplaced Fractures



CERT Basic Training
Unit 4: Disaster Medical Operations – Part 2

4-38



Dislocations

- Dislocation is injury to ligaments around joint
 - So severe that it permits separation of bone from its normal position in joint
- Treatment
 - Immobilize; do NOT relocate
 - Check PMS before and after splinting/immobilization



CERT Basic Training
Unit 4: Disaster Medical Operations – Part 2

4-39



Signs of Sprain

- Tenderness at site
- Swelling and bruising
- Restricted use or loss of use



Damaged vessels from an ankle sprain can cause bruising

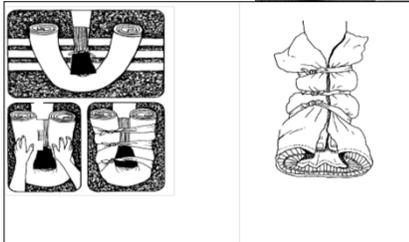
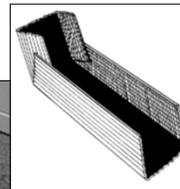
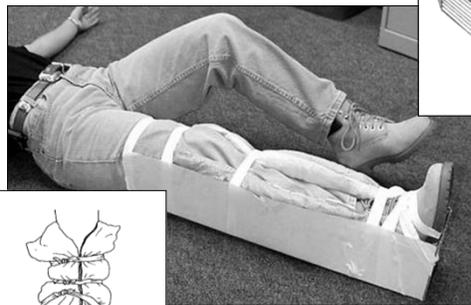


CERT Basic Training
Unit 4: Disaster Medical Operations – Part 2

4-40



Splinting



CERT Basic Training
Unit 4: Disaster Medical Operations – Part 2

4-41



Splinting Guidelines

1. Support injured area above and below injury
2. Assess PMS in extremity
3. Splint injury in position that you find it
4. Don't try to realign bones or joints
5. Fill voids to stabilize and immobilize
6. Immobilize above and below injury
7. After splinting, reassess PMS



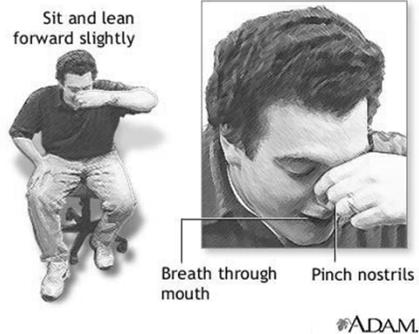
Nasal Injuries

- Causes
 - Blunt force to nose
 - Skull fracture
 - Nontrauma conditions, e.g., sinus infections, high blood pressure, and bleeding disorders
- Cautions
 - Large blood loss from nosebleed can lead to shock
 - Actual blood loss may not be evident because victim will swallow some amount of blood



Treatment of Nasal Injuries

- Control nasal bleeding:
 - Pinch nostrils or put pressure on upper lip under nose
 - Have victim sit with head forward, NOT back
- Ensure that airway remains open
- Keep victim calm



CERT Basic Training
Unit 4: Disaster Medical Operations – Part 2

4-44



Cold-Related Injuries

- Hypothermia :
 - Occurs when body's temperature drops below normal
- Frostbite:
 - Occurs when extreme cold shuts down blood flow to extremities, causing tissue death



CERT Basic Training
Unit 4: Disaster Medical Operations – Part 2

4-45



Symptoms of Hypothermia

- Body temperature of 95° F or lower
- Redness or blueness of skin
- Numbness and shivering
- Slurred speech
- Unpredictable behavior
- Listlessness



CERT Basic Training
Unit 4: Disaster Medical Operations – Part 2

4-46



Hypothermia Treatment

- Remove wet clothing
- Wrap victim in blanket
- Protect victim from weather
- Provide food and drink to conscious victims
- Do not attempt to massage to warm body
- Place unconscious victim in recovery position
- Place victim in warm bath



CERT Basic Training
Unit 4: Disaster Medical Operations – Part 2

4-47



Symptoms of Frostbite

- Skin discoloration
- Burning or tingling sensation
- Partial or complete numbness



FIGURE 29-8 ▲ Edema and blister formation 24 hours after frostbite injury in an area covered by a tightly fitted boot. (From Auerbach PS: *Wilderness medicine*, ed 4, St Louis, 2001, Mosby.)



CERT Basic Training
Unit 4: Disaster Medical Operations – Part 2

4-48



Frostbite Treatment

- Immerse injured area in warm (NOT hot) water
 - Warm slowly!
- Do NOT allow part to re-freeze
- Do NOT attempt to use massage
- Wrap affected body parts in dry, sterile dressing



CERT Basic Training
Unit 4: Disaster Medical Operations – Part 2

4-49



Heat-Related Injuries

- Heat cramps:
 - Muscle spasms brought on by over-exertion in extreme heat
- Heat exhaustion:
 - Occurs when exercising or working in extreme heat results in loss of body fluids
- Heat stroke:
 - Victim's temperature control system shuts down
 - Body temperature rises so high that brain damage and death may result



CERT Basic Training
Unit 4: Disaster Medical Operations – Part 2

4-50



Symptoms of Heat Exhaustion

- Cool, moist, pale or flushed skin
- Heavy sweating
- Headache
- Nausea or vomiting
- Dizziness
- Exhaustion



CERT Basic Training
Unit 4: Disaster Medical Operations – Part 2

4-51



Symptoms of Heat Stroke

- Hot, red skin
- Lack of perspiration
- Changes in consciousness
- Rapid, weak pulse and rapid, shallow breathing



Treatment of Heat-Related Injuries

- Remove from heat to cool environment
- Cool body slowly
- Have the victim drink water, SLOWLY
- No food or drink if victim is experiencing vomiting, cramping, or is losing consciousness



Treatment for Bites/Stings

- If bite or sting is suspected, and situation is non-emergency:
 - Remove stinger if still present by scraping edge of credit card or other stiff, straight-edged object across stinger
 - Wash site thoroughly with soap and water
 - Place ice on site for 10 minutes on and 10 minutes off



Anaphylaxis

- Check airway and breathing
- Calm individual
- Remove constrictive clothing and jewelry
- Find and help administer victim's Epi-pen
- Watch for signs of shock and treat appropriately



Unit Summary

- Public health concerns related to sanitation, hygiene, and water purification
- Organization of disaster medical operations
- Establishing treatment areas
- Conducting head-to-toe assessments
- Treating wounds, fractures, sprains, and other common injuries



Homework Assignment

- Read unit to be covered in next session
- Bring necessary supplies for next session
- Wear appropriate clothes for next session
- Practice complete head-to-toe assessment on friend or family member





Light Search and Rescue Operations

CERT Basic Training Unit 5



Search and Rescue

- Consists of three separate operations
 - Sizeup: Using 9-step, continual model
 - Search: Locating victims and documenting
 - Rescue: Extricating victims



Deciding to Attempt Rescue

- Decision based on three factors
 - The risks involved for the rescuer
 - Greatest good for the greatest number
 - Resources and manpower available



CERT Basic Training
Unit 5: Light Search and Rescue Operations

5-2



Goals of Search and Rescue

- Rescue greatest number in shortest amount of time
- Get walking wounded out first
- Rescue lightly trapped victims next
- Keep the rescuer safe



CERT Basic Training
Unit 5: Light Search and Rescue Operations

5-3



Effective Search and Rescue

- Depends on:
 - Effective sizeup
 - Rescuer safety
 - Victim safety



CERT Basic Training
Unit 5: Light Search and Rescue Operations

5-4



Unit Objectives

- Identify sizeup requirements
- Describe most common search techniques
- Use safe techniques for debris removal
- Use safe techniques for victim extrication
- Describe ways to protect rescuers



CERT Basic Training
Unit 5: Light Search and Rescue Operations

5-5



Unit Topics

- Safety During Search and Rescue Operations
- Conducting Interior and Exterior Searches
- Conducting Rescue Operations



FEMA

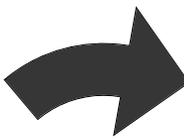
CERT Basic Training
Unit 5: Light Search and Rescue Operations

5-6



CERT Sizeup

1. Gather Facts
2. Assess Damage
3. Consider Probabilities
4. Assess Your Situation
5. Establish Priorities
6. Make Decisions
7. Develop Plan of Action
8. Take Action
9. Evaluate Progress



**REMEMBER:
CERT SIZEUP IS A
CONTINUAL
PROCESS**



FEMA

CERT Basic Training
Unit 5: Light Search and Rescue Operations

5-7



Sizeup: Step 1

Gather Facts

- Time of event and day of the week
- Construction type/terrain
- Occupancy
- Weather
- Hazards



FEMA

CERT Basic Training
Unit 5: Light Search and Rescue Operations

5-8



Sizeup: Step 2

Assess and Communicate Damage

The CERT mission changes if:

- Damage is light
- Damage is moderate
- Damage is heavy



FEMA

CERT Basic Training
Unit 5: Light Search and Rescue Operations

5-9



Light Damage

- Superficial
- Broken windows
- Superficial cracks or breaks in wall surface
- Minor damage to the interior contents
- Safe to enter and remain



FEMA

CERT Basic Training
Unit 5: Light Search and Rescue Operations

5-10



Moderate Damage

- Visible signs of damage
- Decorative work damaged or fallen
- Many visible cracks or breaks in wall
- Major damage to interior contents
- Building still on foundation
- Enter only to save lives



FEMA

CERT Basic Training
Unit 5: Light Search and Rescue Operations

5-11



Heavy Damage

- Partial or total collapse
- Tilting
- Obvious structural instability
- Building off foundation



Do not enter a building with heavy damage under any circumstances



CERT Basic Training
Unit 5: Light Search and Rescue Operations

5-12



Sizeup: Step 3

Consider Probabilities

- How stable is the situation?
- What else could go wrong?
- What does it mean for the search and rescue?



CERT Basic Training
Unit 5: Light Search and Rescue Operations

5-13



Sizeup: Step 4

Assess Your Situation

- Is the situation safe enough to continue?
- What risks will rescuers face?
- What resources are needed?
- What resources are available?



CERT Basic Training
Unit 5: Light Search and Rescue Operations

5-14



Rescue Resources

- Personnel
 - Firefighters
 - Police
 - Nurse, M.D.
 - Contractor
- Tools
 - Crowbars
 - Auto jacks
 - Chainsaws
- Equipment



CERT Basic Training
Unit 5: Light Search and Rescue Operations

5-15



Sizeup: Step 5

Establish Priorities

- What should be done?
- In what order?
- How to rescue the greatest number in the shortest amount of time?



CERT Basic Training
Unit 5: Light Search and Rescue Operations

5-16



Sizeup: Step 6

Make Decisions

- Keep in mind:
 - Safety of CERT members
 - Life safety for victims and others
 - Protection of the environment
 - Protection of property



CERT Basic Training
Unit 5: Light Search and Rescue Operations

5-17



Sizeup: Step 7

Develop Plan of Action

- Focus operation on established priorities and decisions
- Provide for documentation to give to responding agencies
- Provide for documentation to become part of CERT records



CERT Basic Training
Unit 5: Light Search and Rescue Operations

5-18



Sizeup: Step 8

Take Action

- Based on plan developed during Step 7



CERT Basic Training
Unit 5: Light Search and Rescue Operations

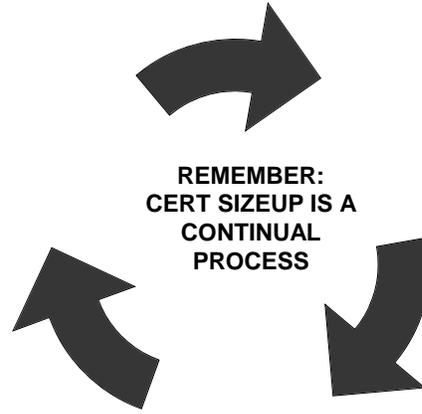
5-19



Sizeup: Step 9

Evaluate Progress

- Most critical step
- Monitor plan's effectiveness and safety



CERT Basic Training
Unit 5: Light Search and Rescue Operations

5-20



Specific Safety Considerations



- Make rescuer safety primary concern
- Use a buddy system
- Be alert for hazards
- Use safety equipment
- Rotate teams

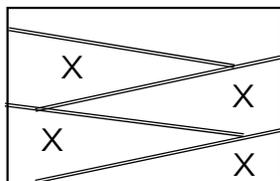


CERT Basic Training
Unit 5: Light Search and Rescue Operations

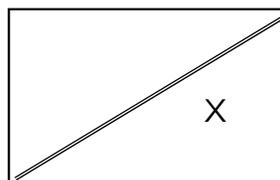
5-21



Structural Voids

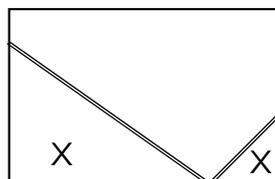


Pancake Void



Lean-to Void

If you see collapsed floors or walls, get out!



'V' Void

X = Voids



FEMA

CERT Basic Training
Unit 5: Light Search and Rescue Operations

5-22



Individual Voids

- Spaces where victims may seek protection
 - Bathtubs
 - Underneath desks
 - Inside cabinets
 - Under/next to beds
 - Inside closets



FEMA

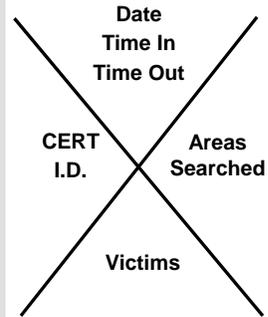
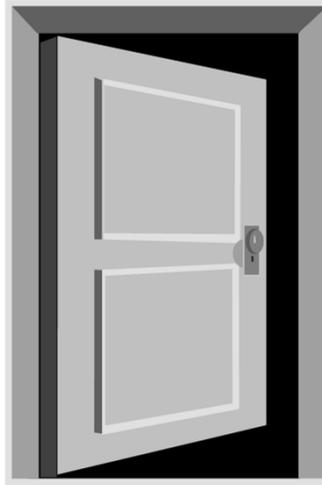
CERT Basic Training
Unit 5: Light Search and Rescue Operations

5-23



Search Markings

- Upon entering search area:
 - Make a slash
 - Enter info
- Upon leaving search area:
 - Complete 'X'
 - Enter info



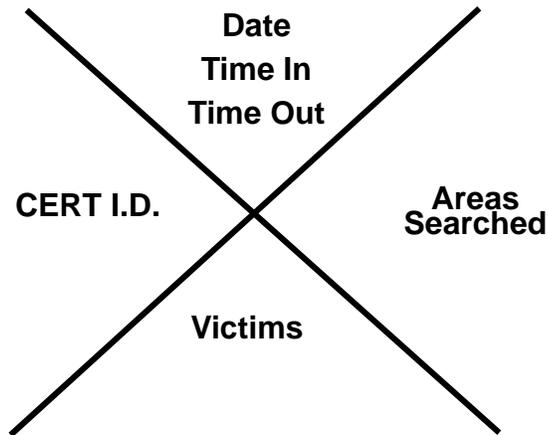
CERT Basic Training
Unit 5: Light Search and Rescue Operations

5-24



Search Markings

What information do you mark?



CERT Basic Training
Unit 5: Light Search and Rescue Operations

5-25



Search Markings

Example:

2/15/08
In: 1430
Out: 1515

CERT-23

FL 1-2 searched
Stairs to FL-3 unsafe

2L
Moved to
CERT-23 med
ops



CERT Basic Training
Unit 5: Light Search and Rescue Operations

5-26



Search Methodology

- Call out to victims, “If anyone can hear my voice, come here”
- Ask any victims who do respond for more information about the building or others who may be trapped
- Victims might be in shock or confused



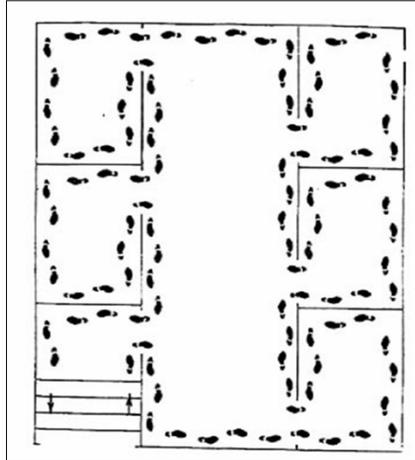
CERT Basic Training
Unit 5: Light Search and Rescue Operations

5-27



Search Methodology

- Bottom-up/top-down for a multi-story building
- Right wall/left wall for a single floor
- Stop frequently to listen



FEMA

CERT Basic Training
Unit 5: Light Search and Rescue Operations

5-28



Search Methodology

- Stop frequently to listen for:
 - Tapping
 - Movement
 - Voices



FEMA

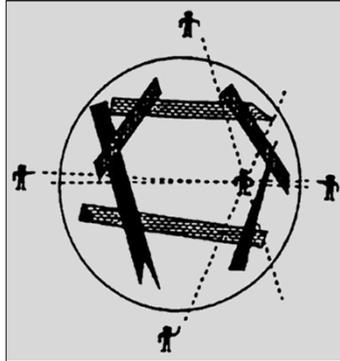
CERT Basic Training
Unit 5: Light Search and Rescue Operations

5-29



Search Methodology

- Triangulation allows rescuers to view a location from several perspectives



CERT Basic Training
Unit 5: Light Search and Rescue Operations

5-30



Search Methodology

- Keep records of rescued victims and of those who remain trapped or are dead
- Report information to emergency services personnel



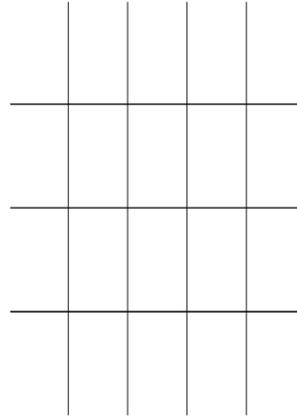
CERT Basic Training
Unit 5: Light Search and Rescue Operations

5-31



Exterior Search

- Set up a grid search
 - Set distance between searchers according to visibility and debris
 - Overlap patterns for full coverage
 - Search in as straight a line as possible
 - Mark areas that have been searched



FEMA

CERT Basic Training
Unit 5: Light Search and Rescue Operations

5-32



Rescue Operations

- Remove objects and debris to free victims and create safe rescue environment
- Triage victims
- Remove victims
- Remove debris



FEMA

CERT Basic Training
Unit 5: Light Search and Rescue Operations

5-33



Creating a Safe Environment

- Maintain rescuer safety
- Triage in lightly and moderately damaged buildings
- Evacuate victims as quickly as possible



CERT Basic Training
Unit 5: Light Search and Rescue Operations

5-34



Precautions to Minimize Risk

- Know your limitations
- Follow safety procedures
- Remove debris by:
 - Leveraging
 - Cribbing

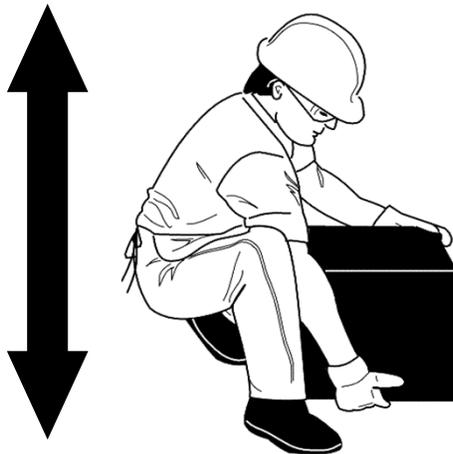


CERT Basic Training
Unit 5: Light Search and Rescue Operations

5-35



Proper Lifting Procedures



- Back straight
- Bend knees
- Keep load close to body
- Push up with legs



CERT Basic Training
Unit 5: Light Search and Rescue Operations

5-36



Leveraging and Cribbing



- For heavy lifting
- Performed in tandem
- Helps extricate victims
- Various materials and objects may be used



CERT Basic Training
Unit 5: Light Search and Rescue Operations

5-37



Two Types of Removal

- Self removal or assist
- Lifts and drags



CERT Basic Training
Unit 5: Light Search and Rescue Operations

5-38



Which Extrication Method?

- General stability of the immediate environment
- Number of rescuers available
- Strength and ability of the rescuers
- Condition of victim



CERT Basic Training
Unit 5: Light Search and Rescue Operations

5-39



One-Person Arm Carry

- Lift around victim's back and under knees
- Lift victim by keeping your own back straight and lifting with legs



CERT Basic Training
Unit 5: Light Search and Rescue Operations

5-40



Pack-Strap Carry



CERT Basic Training
Unit 5: Light Search and Rescue Operations

5-41



Two-Person Carry



FEMA

CERT Basic Training
Unit 5: Light Search and Rescue Operations

5-42



Chair Carry



FEMA

CERT Basic Training
Unit 5: Light Search and Rescue Operations

5-43



Blanket Carry



CERT Basic Training
Unit 5: Light Search and Rescue Operations

5-44



Log Rolling



CERT Basic Training
Unit 5: Light Search and Rescue Operations

5-45



Blanket Drag



FEMA

CERT Basic Training
Unit 5: Light Search and Rescue Operations

5-46



Unit Summary

- You should know:
 - How to decide whether to attempt rescue
 - The objectives of interior and exterior search and rescue
 - How to perform search and rescue sizeup
 - Building markings
 - Rescue functions
 - How to remove debris
 - How to extricate victims



FEMA

CERT Basic Training
Unit 5: Light Search and Rescue Operations

5-47



Homework Assignment

1. Read unit to be covered in next session
2. Bring necessary supplies to next session
3. Wear appropriate clothes to next session



CERT Basic Training
Unit 5: Light Search and Rescue Operations

5-48





CERT Organization

CERT Basic Training Unit 6



Unit Objectives

- Describe the CERT structure
- Identify how CERTs interrelate with ICS
- Explain documentation requirements



Unit Topics

- CERT Organization
- Mobilization
- Documentation



CERT Basic Training
Unit 6: CERT Organization

6-2



Principles of Onscene Management

- Maintain the safety of disaster workers
- Provide clear leadership and organizational structure
- Improve effectiveness of rescue efforts



CERT Basic Training
Unit 6: CERT Organization

6-3



CERT Onscene Management

- Well-defined management structure
- Manageable span of control
- Common terminology
- Effective communication
- Consolidated action plans
- Comprehensive resource management
- Accountability



CERT Basic Training
Unit 6: CERT Organization

6-4



Objectives for On-Scene Management

1. Identify scope of incident
2. Determine overall strategy
3. Deploy resources
4. Document actions and results

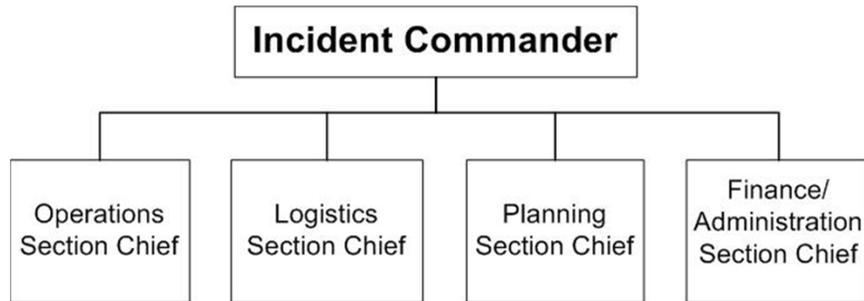


CERT Basic Training
Unit 6: CERT Organization

6-5



Incident Command System



CERT Basic Training
Unit 6: CERT Organization

6-6



CERT Operations

- Command structure
- CERT Incident Commander/Team Leader (IC/TL)
- Command Post
- Expanded structure as needed



CERT Basic Training
Unit 6: CERT Organization

6-7



Dealing with the Media

- Refer media inquiries to CERT IC/TL
- Do not let media inhibit CERT goals
- Be careful about information released



CERT Basic Training
Unit 6: CERT Organization

6-8



NIMS Compliance

- Ability to work together
- IS-100.a:
Introduction to ICS
- IS-700.b:
Introduction to NIMS
- <http://training.fema.gov/IS/NIMS.asp>



CERT Basic Training
Unit 6: CERT Organization

6-9



CERT Mobilization

- CERTs take care of themselves, their families, their homes, their neighbors
- Proceed to predesignated staging area
- IC/TL is established, organizes the group
- IC/TL prioritizes actions
- Organization is flexible and evolves based on new information



Rescuer Safety

- Rescuer safety is first priority
- Heavy damage = No rescue
- Moderate damage = Locate, triage, evacuate
- Light damage = Locate, triage, continue sizeup, and document



Documentation

- Section Chiefs
 - Provide Command Post with information
- Command Post
 - Documents situation status
 - Incident locations
 - Access routes
 - Identified hazards
 - Support locations



CERT Basic Training
Unit 6: CERT Organization

6-12



Documentation



CERT Basic Training
Unit 6: CERT Organization

6-13



Documentation Forms

- Damage Assessment
- Personnel Resources Sign-In
- Incident/Assignment Tracking Log
- Briefing Assignment
- Victim Treatment Area Record
- Communications Log
- Equipment Inventory
- General Message



CERT Basic Training
Unit 6: CERT Organization

6-14



Documentation Flow

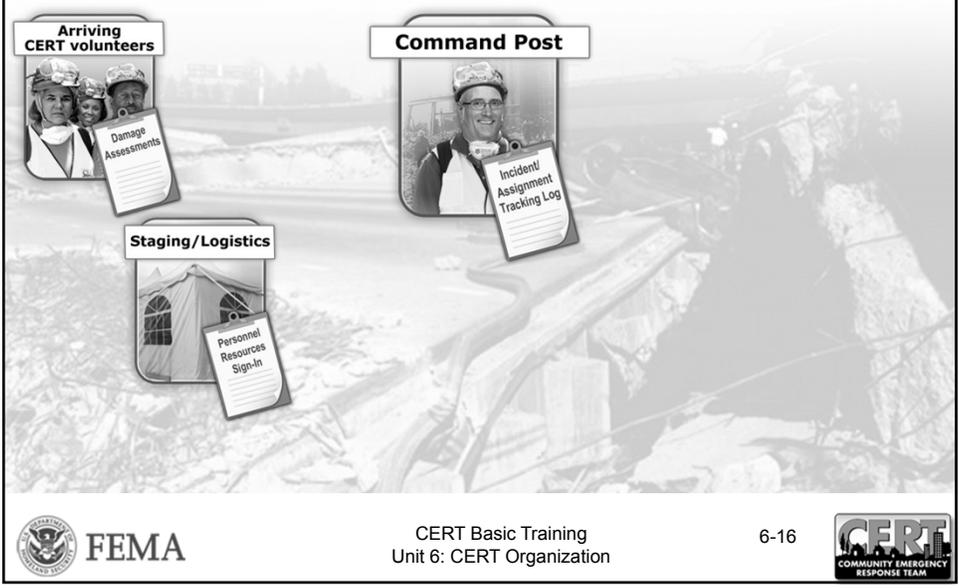


CERT Basic Training
Unit 6: CERT Organization

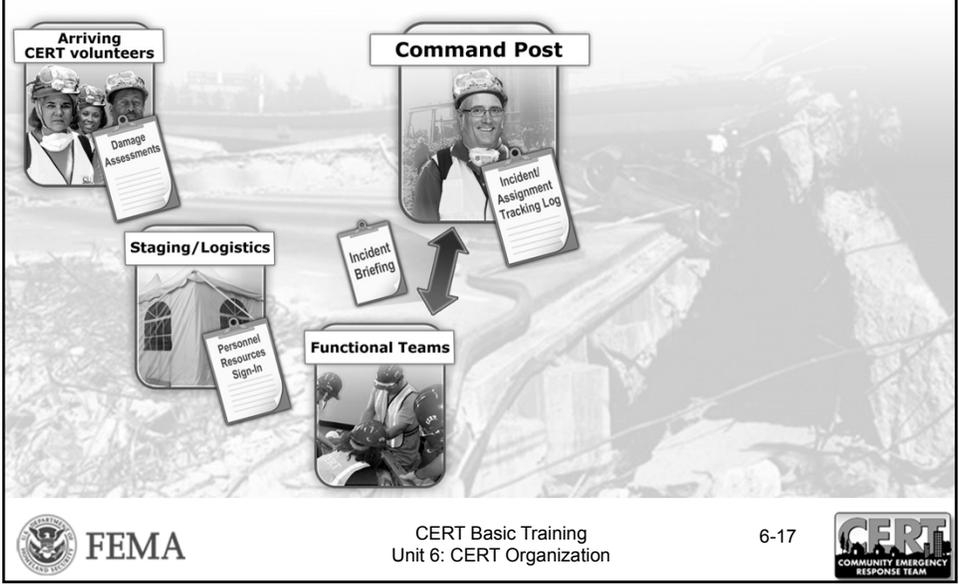
6-15



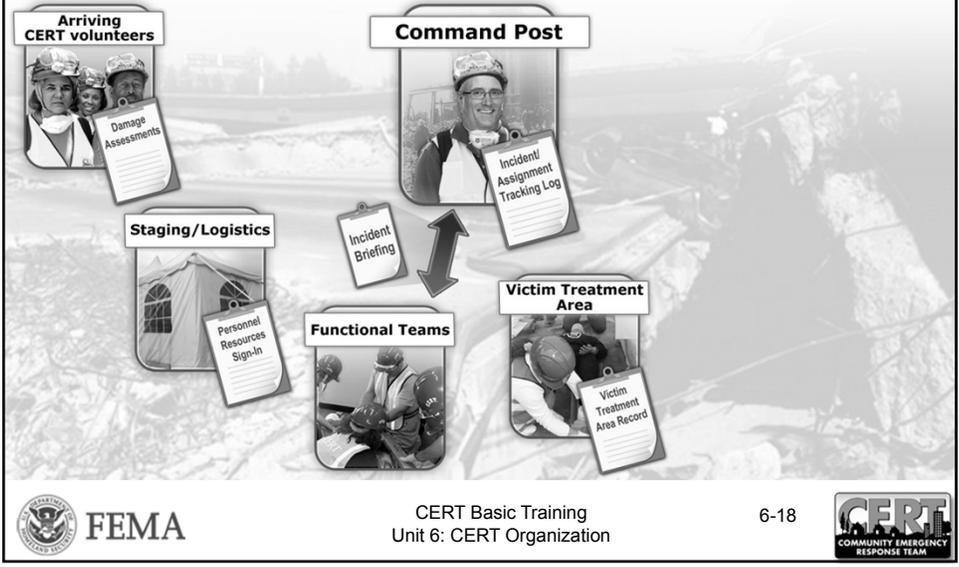
Documentation Flow



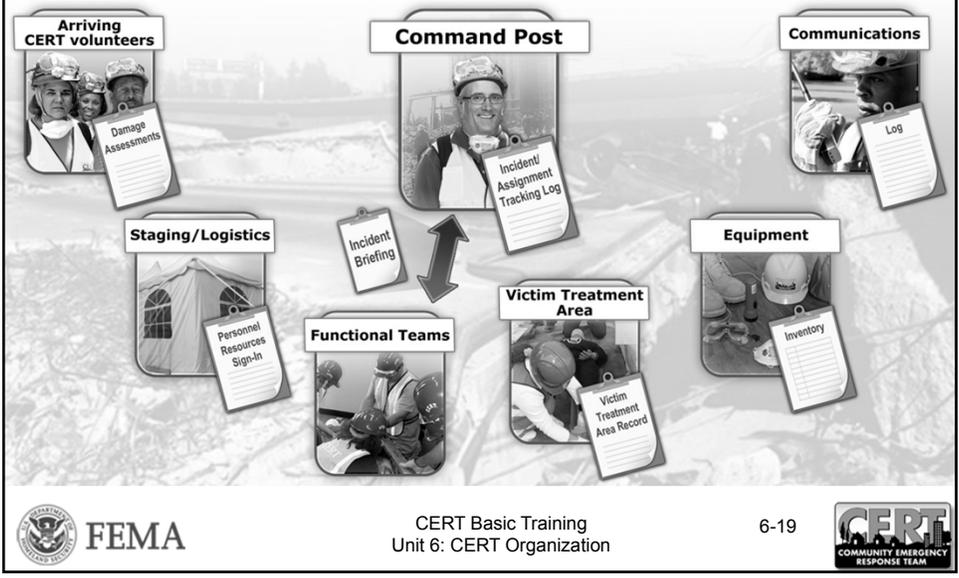
Documentation Flow



Documentation Flow



Documentation Flow



Unit Summary

- ICS provides flexible means of organization
- “Is it safe to attempt the rescue?”
- Document and communicate information to all CERT levels
- Provide Command Post with ongoing information about damage assessment, group status, and needs
- Command Post documents and tracks situation status



CERT Basic Training
Unit 6: CERT Organization

6-20



Homework Assignment

1. Read unit to be covered in next session
2. Bring necessary supplies to next session
3. Wear appropriate clothes to next session



CERT Basic Training
Unit 6: CERT Organization

6-21





Disaster Psychology

CERT Basic Training Unit 7



Unit Objectives

- Describe disaster and post-disaster emotional environment for victims and rescuers
- Describe steps rescuers can take to relieve their own stress and that of other survivors



Unit Topics

- Disaster Trauma
- Team Well-Being
- Working with Survivors' Trauma



CERT Basic Training
Unit 7: Disaster Psychology

7-2



Psychological Trauma

- Your own personal losses
- Working in your neighborhood
- Assisting neighbors, friends, coworkers who have also been injured
- Not feeling safe and secure



CERT Basic Training
Unit 7: Disaster Psychology

7-3



Psychological Symptoms of Trauma

- Irritability or anger
- Self-blame or blaming others
- Isolation and withdrawal
- Fear of recurrence
- Feeling stunned, numb, overwhelmed
- Feeling helpless
- Mood swings
- Sadness, depression, grief
- Denial
- Concentration and memory problems
- Relationship problems/marital discord



FEMA

CERT Basic Training
Unit 7: Disaster Psychology

7-4



Physiological Symptoms of Trauma

- Loss of appetite
- Headaches or chest pain
- Diarrhea, stomach pain, or nausea
- Hyperactivity
- Increase in drug consumption
- Nightmares
- Insomnia
- Fatigue



FEMA

CERT Basic Training
Unit 7: Disaster Psychology

7-5



Team Well-Being

- Actions can be taken before, during, and after an incident to help manage emotional impact of disaster response work
- Knowing possible psychological and physiological symptoms of disaster trauma helps manage impact
- Learn to manage stress
 - CERT members for themselves
 - CERT leaders during response



FEMA

CERT Basic Training
Unit 7: Disaster Psychology

7-6



How You Reduce Stress

- Get enough sleep
- Exercise regularly
- Eat a balanced diet
- Balance work, play, and rest
- Allow yourself to receive as well as give
- Connect with others
- Use spiritual resources



FEMA

CERT Basic Training
Unit 7: Disaster Psychology

7-7



Take Care of Yourself

- Be aware of trauma that can follow a disaster
- Explain to family members and friends what you need:
 - Listen when you want to talk
 - Don't force you to talk



FEMA

CERT Basic Training
Unit 7: Disaster Psychology

7-8



How Team Leaders Reduce Stress

- Brief CERT personnel beforehand
- Remember CERT is a team
- Rest and regroup
- Take breaks away
- Eat properly, stay hydrated
- Arrange for debriefing
- Rotate teams and duties
- Phase out workers gradually



FEMA

CERT Basic Training
Unit 7: Disaster Psychology

7-9



Critical Incident Stress Debriefing

1. Introductions and description
2. Review of factual material
3. Sharing of initial thoughts and feelings
4. Sharing of emotional reactions to incident
5. Instruction about normal stress reactions
6. Review of symptoms
7. Closing and further needs assessment



CERT Basic Training
Unit 7: Disaster Psychology

7-10



Phases of a Crisis

- Impact
- Inventory
- Rescue
- Recovery



CERT Basic Training
Unit 7: Disaster Psychology

7-11



Traumatic Crisis

- Actual or potential death
- Serious injury
- Destruction
- Loss of contact with family or close friends



CERT Basic Training
Unit 7: Disaster Psychology

7-12



Effects of Traumatic Stress

- Cognitive functioning
- Physical health
- Interpersonal relationships



CERT Basic Training
Unit 7: Disaster Psychology

7-13



Mediating Factors

- Prior experience with a similar event
- Intensity of disruption
- Individual feelings about event
- Emotional strength of individual
- Length of time since event



FEMA

CERT Basic Training
Unit 7: Disaster Psychology

7-14



Stabilizing Victims

- Assess survivors for injury or shock
- Get uninjured people to help
- Provide support by:
 - Listening
 - Empathizing
- Help survivors connect with natural support systems



FEMA

CERT Basic Training
Unit 7: Disaster Psychology

7-15



How to Be an Empathetic Listener

- Put yourself in the speaker's shoes
- Listen for meaning, not just words
- Pay attention to nonverbal communication
- Paraphrase the speaker



FEMA

CERT Basic Training
Unit 7: Disaster Psychology

7-16



Avoid Saying...

- "I understand"
- "Don't feel bad"
- "You're strong" or "You'll get through this"
- "Don't cry"
- "It's God's will"
- "It could be worse"
- "At least you still have..."
- "Everything will be okay"



FEMA

CERT Basic Training
Unit 7: Disaster Psychology

7-17



Managing the Death Scene

- Cover the body; treat it with respect
- Move the body to temporary morgue
- Follow local laws and protocols
- Talk with local authorities



CERT Basic Training
Unit 7: Disaster Psychology

7-18



Informing Family/Friends of a Death

- Separate the family member(s) or friend(s)
- Have the person(s) sit down
- Make eye contact
- “I’m sorry, but your family member has died. I am so sorry.”
- Let the family and friends grieve



CERT Basic Training
Unit 7: Disaster Psychology

7-19



Unit Summary

- Rescues may be unpleasant or uncomfortable
- Psychological and physiological symptoms of trauma
- Take steps to reduce stress
- CISD is one intervention
- Four emotional phases of a disaster
- Stress affects cognition, health, and interactions
- Stabilize individuals
- Be an empathetic listener



FEMA

CERT Basic Training
Unit 7: Disaster Psychology

7-20



Homework Assignment

1. Read unit to be covered in next session
2. Bring necessary supplies to next session
3. Wear appropriate clothes to next session



FEMA

CERT Basic Training
Unit 7: Disaster Psychology

7-21





Terrorism and CERT

CERT Basic Training Unit 8



Unit Objectives

- Define terrorism
- Identify potential targets in the community
- Identify the eight signs of terrorism
- Identify CERT operating procedures for a terrorist incident
- Describe the actions to take following a suspected terrorist incident



CERT Basic Training
Unit 8: Terrorism and CERT

8-1



Unit Topics

- What Is Terrorism?
- Terrorist Targets
- Terrorist Weapons
- CBRNE Indicators
- Preparing at Home, Work, and in Your Neighborhood
- CERTs and Terrorist Incidents



FEMA

CERT Basic Training
Unit 8: Terrorism and CERT

8-2



What Is Terrorism?

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



FEMA

CERT Basic Training
Unit 8: Terrorism and CERT

8-3



Terrorism in the Past



FEMA

CERT Basic Training
Unit 8: Terrorism and CERT

8-4



Terrorist Goals

- Mass casualties
- Loss of critical resources
- Disruption of vital services
- Disruption of the economy
- Heightened fear



FEMA

CERT Basic Training
Unit 8: Terrorism and CERT

8-5



Terrorist Targets



- Seats of government
- Key industries
- Bridges, subways, tunnels, and other key transportation facilities
- Water supplies and utilities



CERT Basic Training
Unit 8: Terrorism and CERT

8-6



Terrorist Weapons

1. Chemical
2. Biological
3. Radiological
4. Nuclear
5. High-yield Explosives



CERT Basic Training
Unit 8: Terrorism and CERT

8-7



Chemical Weapons

1. Blister agents
2. Blood agents
3. Choking agents
4. Nerve agents
5. Riot-control agents



FEMA

CERT Basic Training
Unit 8: Terrorism and CERT

8-8



Biological Weapons



Routes of exposure:

- Inhalation
- Ingestion
- Absorption



FEMA

CERT Basic Training
Unit 8: Terrorism and CERT

8-9



Radiological Weapons

- Considered a higher threat because components are easy to obtain



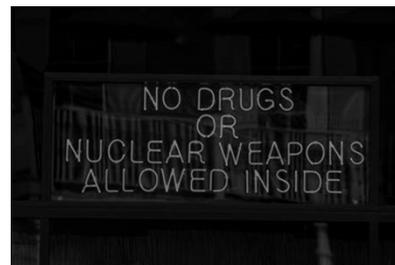
CERT Basic Training
Unit 8: Terrorism and CERT

8-10



Nuclear Weapons

- Derives destructive force from nuclear reaction
- Affected area is larger as contaminated objects spread
- Potential for casualties extends beyond initial attack
- Long-term effects difficult to monitor and track



CERT Basic Training
Unit 8: Terrorism and CERT

8-11



High-Yield Explosives

- Weapon of choice for terrorists
 - Used in 80% of attacks
- Military munitions: grenades, mortars, surface-to-air missiles
- Newer explosives called improvised explosive devices or IEDs
 - Any device created in an improvised manner used to destroy, disfigure, distract, or harass



FEMA

CERT Basic Training
Unit 8: Terrorism and CERT

8-12



Assessing the Risk

- Types of terrorist weapons in order of greatest risk (least to greatest):
 - Nuclear
 - Chemical
 - Radiological
 - Biological
 - High-yield explosives



FEMA

CERT Basic Training
Unit 8: Terrorism and CERT

8-13



Eight Signs of Terrorism

1. Surveillance
2. Elicitation
3. Tests of security
4. Funding
5. Acquiring supplies
6. Impersonation or suspicious people
7. Rehearsals and dry runs
8. Deployment



FEMA

CERT Basic Training
Unit 8: Terrorism and CERT

8-14



Attack Has Occurred or Is Underway

- Vapor clouds or mists
- Unscheduled spraying
- Materials or equipment unusual for the area
- Unusual odors or tastes
- Out of place and unattended packages
- Leaking packages



FEMA

CERT Basic Training
Unit 8: Terrorism and CERT

8-15



See CBRNE Indicators?

- If you observe any indications of a terrorist incident you should:
 - Not touch it
 - Move away from object or area
 - Report it to authorities immediately



CERT Basic Training
Unit 8: Terrorism and CERT

8-16



Physical Signs of Chemical-Biological Attack

- Sick or dead animals, fish, or birds
- Large number of persons seeking medical attention
- Multiple victims exhibiting similar symptoms
- Multiple casualties without obvious signs of trauma



CERT Basic Training
Unit 8: Terrorism and CERT

8-17



Preparing at Home, Work, Neighborhood

- Personal and family safety is first priority!
- CERT members are NOT equipped or trained to respond to terrorist incidents
- Terrorism incident scenes are also crime scenes



FEMA

CERT Basic Training
Unit 8: Terrorism and CERT

8-18



Prepare for Terrorist Activity

- CBRNE events are survivable
- Preparing for terrorist incidents similar to preparing for natural hazards
- Review Unit 1 guidelines
- Certain actions more relevant to CBRNE



FEMA

CERT Basic Training
Unit 8: Terrorism and CERT

8-19



Shelter-in-Place Procedures

- Shut off ventilation systems
- Go to your shelter-in-place room
- Use precut plastic sheeting to cover air openings
- Tape sheeting over doors, windows, vents
- Use duct tape to seal other areas
- Listen to a battery-powered radio
- Ventilate room once contaminants are gone



FEMA

CERT Basic Training
Unit 8: Terrorism and CERT

8-20



Protection from Radioactive Fallout

- Go deep inside a building
(distance/shielding)
- Stay inside (time)
- Stay tuned



FEMA

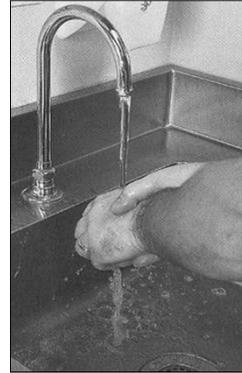
CERT Basic Training
Unit 8: Terrorism and CERT

8-21



Basic Decontamination Procedures

- Leave the contaminated area
- Take decontamination action
 - Remove everything
 - Wash hands
 - Flush the entire body
 - Blot dry
- Report for decontamination
- Food safety



FEMA

CERT Basic Training
Unit 8: Terrorism and CERT

8-22



Treating Others

- First priority for a CERT member is personal safety
 - Take self-protective measures only
 - Do not attempt to treat victims in contaminated area
 - Tell victims about decontamination procedures



FEMA

CERT Basic Training
Unit 8: Terrorism and CERT

8-23



What Professional Responders Will Do

- Follow sizeup steps:
 - What is going on
 - How bad the situation is and how much worse it could get
 - What measures can be taken to control the incident safely
 - What resources will be needed



FEMA

CERT Basic Training
Unit 8: Terrorism and CERT

8-24



Unit Summary

- Terrorists attack to:
 - Intimidate the government or the civilian population
 - Further their objectives
- Their goals are to:
 - Create mass casualties
 - Disrupt critical resources, vital services, and the economy
 - Cause fear



FEMA

CERT Basic Training
Unit 8: Terrorism and CERT

8-25



Unit Summary (cont'd)

Terrorist Weapons

1. Chemical
2. Biological
3. Radiological
4. Nuclear
5. High-yield Explosives



FEMA

CERT Basic Training
Unit 8: Terrorism and CERT

8-26



Unit Summary (cont'd)

CERT Protocol for Terrorist Incidents

- Terrorist incidents are a stop sign!
- Do not proceed if you suspect terrorist activity
- Simple guidelines:
 - Do not touch
 - Move away from object or area
 - Report it to authorities immediately



FEMA

CERT Basic Training
Unit 8: Terrorism and CERT

8-27



Homework Assignment

- Review the materials from the previous units
- Wear appropriate clothing for disaster simulation exercise



CERT Basic Training
Unit 8: Terrorism and CERT

8-28

