

CERT Medical Refresher

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FEMA

Safety Considerations



- Prior to treatment, ensure that both the patient and rescuer are in a safe environment to administer care
- Some questions CERT volunteers to consider
 - Do I feel safe at this spot?
 - Should I leave and move to a safer location, or am I able to stay and start providing care immediately?
 - If I leave, can I take anyone with me?

Approaching the Patient

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



PM 3-2

Providing Comfort

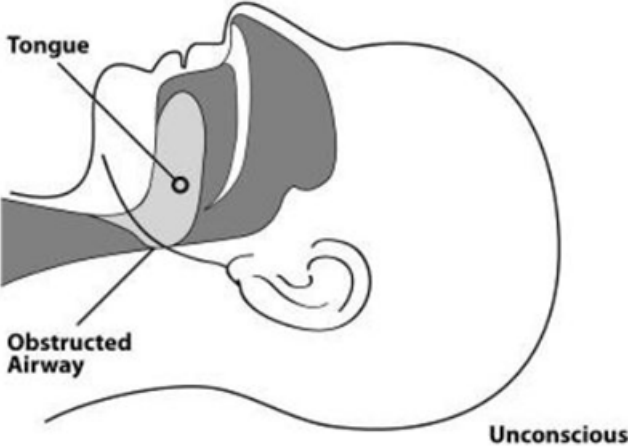
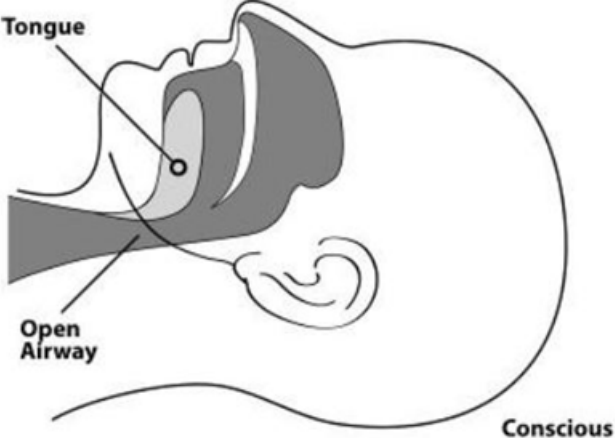


- What can you do?
 - Keep them warm
 - Offer a hand to hold
 - Maintain eye contact
 - Be patient and understanding
 - If you have to move on to provide aid to another person, let them know



PM 3-8

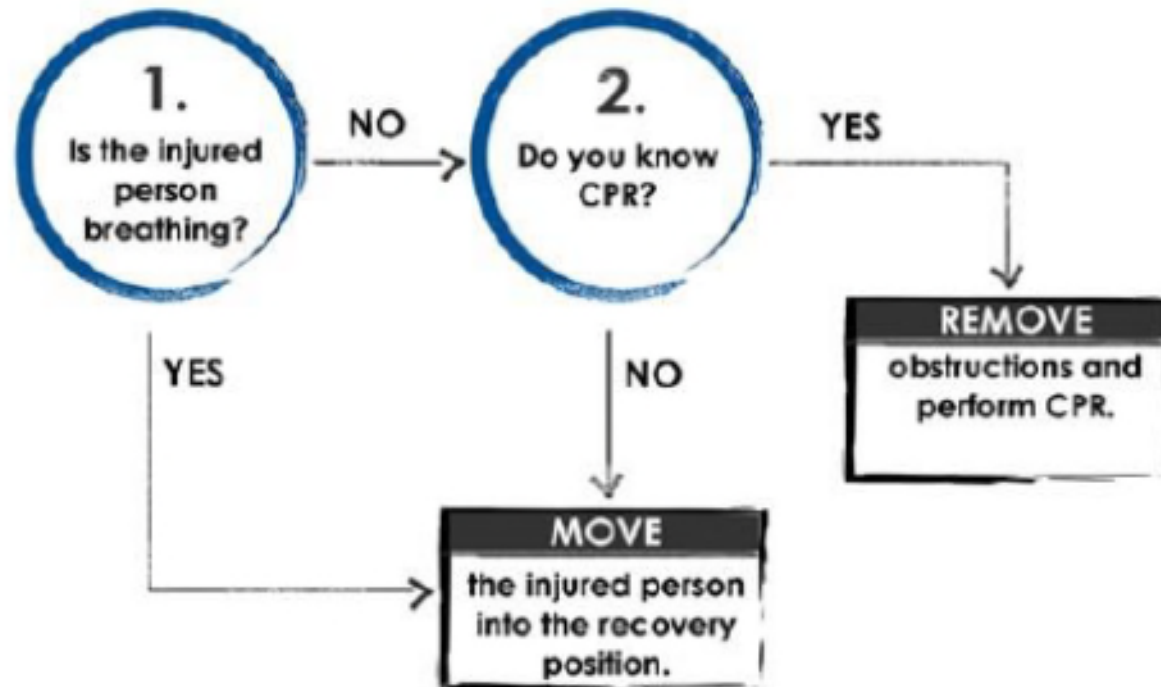
Open vs. Obstructed Airway



PM 3-6



Positioning an Unconscious Patient



Positioning a Conscious Patient



- **When sitting on a raised platform**(e.g., chair, bench): Legs shoulder width apart, elbows or hands on knees, and leaning slightly forward
- **When standing:** Legs shoulder width apart, hands on knees arms straight, and leaning forward with flat back

Recovery Position



- **Body:** Laid on its side
- **Bottom Arm:** Reached outward
- **Top Arm:** Rest hand on bicep of bottom arm
- **Head:** Rest on hand
- **Legs:** Bent slightly
- **Chin:** Raised forward
- **Mouth:** Pointed downward

Life-Threatening Bleeding



- Indicators of life-threatening bleeding:
 - Spurting/steady bleeding
 - Blood is pooling
 - Blood is soaking through over lying clothes
 - Blood is soaking through bandages
 - Amputation

Types of Bleeding



- **Arterial bleeding:** Arteries transport blood under high pressure
 - Blood coming from an artery will spurt
- **Venous bleeding:** Veins transport blood under low pressure
 - Blood coming from a vein will flow
- **Capillary bleeding:** Capillaries also carry blood under low pressure
 - Blood coming from capillaries will ooze

Types of Bleeding



PM 3-3

Controlling Bleeding: Direct Pressure



- Step 1: Find the source(s)
- Step 2: Cover the source
- Step 3: Apply pressure
- Step 4: Maintain pressure until bleeding has stopped

Wound Care



- Main treatment for wounds:
 - Control bleeding
 - Apply dressing and bandage
- Apply dressing and bandage:
 - Apply dressing directly to wound
 - Bandage holds dressing in place



PM 3-11

Rules of Dressing



- If active bleeding:
 - Redress OVER existing dressing
- If no active bleeding:
 - Maintain the pressure and keep wound bandaged until further treatment by a medical professional

Controlling Bleeding: Tourniquets

- Place on injured limb as high as possible
- Pull strap through buckle
- Twist rod until bleeding stops/slows
- Secure the rod
- If bleeding continues, place second tourniquet
- Leave in place until EMS takes over



PM 3-4

Amputations



- 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 survivor

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

Shock

- Shock is often difficult to diagnose
- Main signs of shock:
 - Rapid and shallow breathing
 - Capillary refill of greater than two seconds
 - Failure to follow simple commands, such as “squeeze my hand”
- Symptoms of shock are easily missed. Pay careful attention to your patient



PM 3-5

Maintaining Body Temperature



- Keep the patient warm
 - Remove wet clothing
 - Place something between patient and ground (e.g., cardboard, jacket, blanket)
 - Wrap patient with dry layers (e.g., coat, blanket, Mylar emergency blanket)
 - Shield patient from wind

Treating Burns

- Prevent hypothermia
- Manage pain
- Reduce risk of infection



Burn Severity



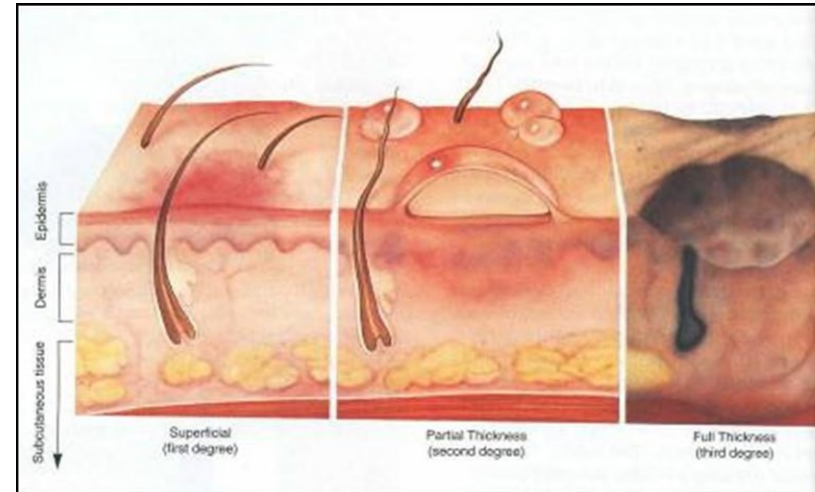
- Factors that affect burn severity:
 - Temperature of burning agent
 - Period of time survivor exposed
 - Area of body affected
 - Size of area burned
 - Depth of burn



PM 3-9

Burn Classifications

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



Treatment for Chemical Burns



- Remove cause of burn and affected clothing or jewelry
- If irritant is dry, gently brush away as much as possible
 - Always brush away from eyes, survivor, and yourself
- Flush with lots of cool running water
- Apply cool, wet compress to relieve pain
- Cover wound loosely with dry, sterile or clean dressing



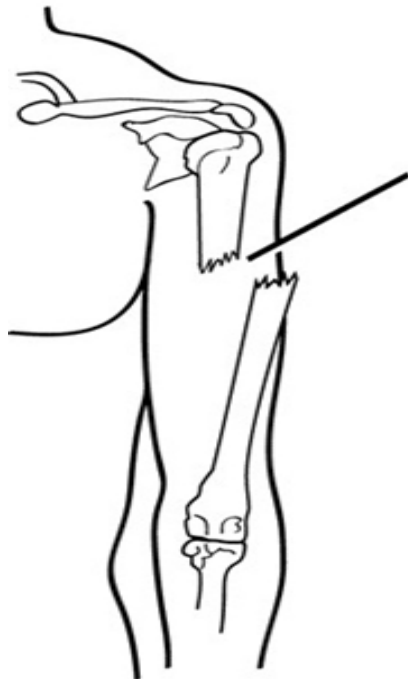
PM 3-10

Fractures, Dislocations, Sprains, Strains



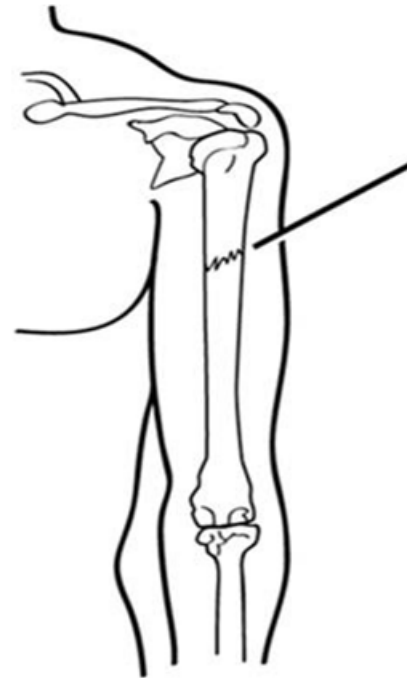
- Immobilize injury and joints immediately above and below injury site
- If uncertain of injury type, treat as fracture

Types of Fractures



Open Fracture

Open Fracture in which the bone protrudes through the skin.

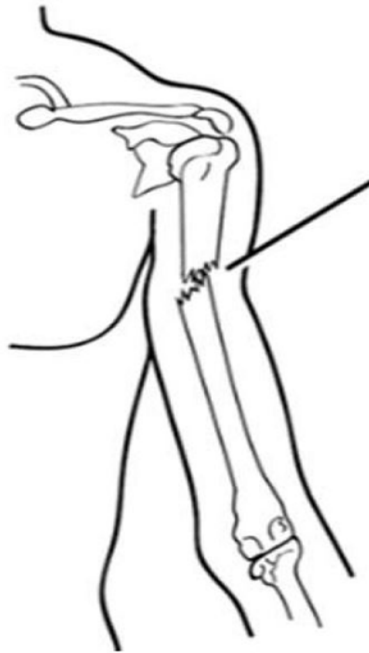


Closed Fracture

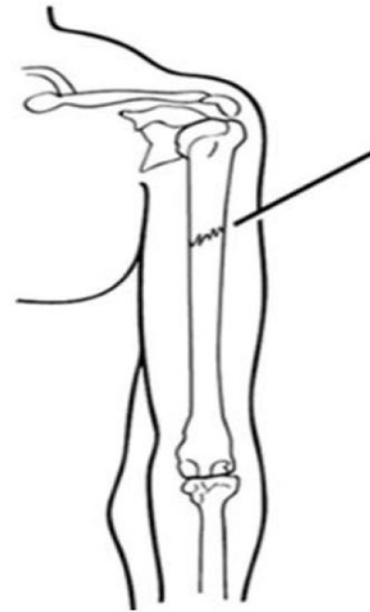
Closed Fracture in which the fracture does not puncture the skin.

PM 3-12

Types of Fractures



Displaced Fracture
Displaced Fracture in which the fractured bone is no longer aligned.



Nondisplaced Fracture
Nondisplaced Fracture in which the fractured bone remains aligned.

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

Dislocations



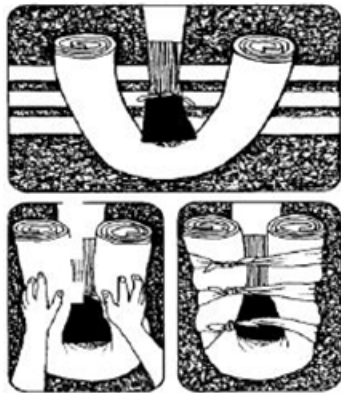
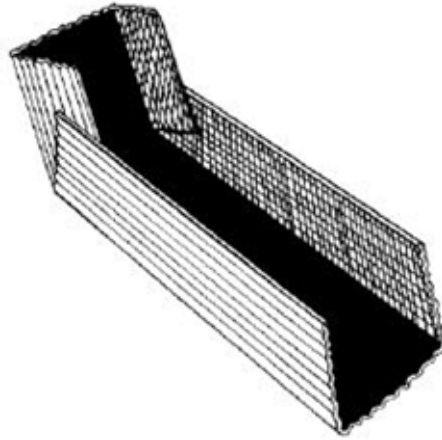
- Dislocation is injury to ligaments around a joint
 - It is so severe that it permits separation of bone from its normal position in a joint
- Treatment:
 - Immobilize; do NOT relocate
 - Check Pulse, Movement, and Sensation (PMS) before and after splinting/immobilization

Signs of Sprain

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



Splinting



PM 3-14

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**
 - Survivor's temperature control system shuts down
 - Body temperature rises so high that brain damage and death may result

Symptoms of Heat Exhaustion



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



PM 3-17

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 heat exhaustion patient drink water, **SLOWLY**
- Do not provide food or drink to the patient if he or she is experiencing vomiting, cramping, or is losing consciousness



At the Beach

- Hazards You May Encounter

- Jellyfish
- Man o' War
- Fire Coral

- Sea Urchins
- Stingrays
- EELS
- Scorpion Fish
- Lion Fish



Jellyfish



Most Stings are NOT fatal

– Poisonous species chiefly in Australia

- Can be dangerous for old, young, immune compromised.
- Risky for people with other allergies especially insect stings.



Jellyfish



Jellyfish Sting



Treatment



Rinse area with vinegar or commercial spray if possible

Remove tentacles while rinsing

- USE GLOVES – tentacles continue to release venom
- Apply heat or immerse in 113°F water for 40 minutes

If hot water or vinegar are unavailable carefully remove tentacles



When to Seek Medical Treatment



If Jellyfish is large, poisonous, or unknown

If rash appears in an area away from the sting site

Signs of allergic reaction

- Difficulty breathing
- Dizziness
- Rapidly spreading rash
- Nausea
- Altered consciousness



Man O'War



Man O' War Treatment



Treat the same as for Jellyfish

- Remove tentacle remains
- Vinegar rinse
- Hot water/heat pack application
- Seek medical treatment if adverse reaction or symptoms of adverse reaction



Fire Coral



Fire Coral



Very mild toxicity

Symptoms

- Burning or stinging sensation
- Rash w/wheals or vesicles and itching
- Possible lymph node swelling
- Rare nausea and emesis



Fire Coral Treatment



Rinse with sea water

- Fresh water will increase the pain

Vinegar rinse

- Isopropyl Alcohol may also be used

Remove any pieces at sting site

Restrict movement

Watch for signs of allergic reaction



Sea Urchins



Sea Urchins



Spines puncture skin

- Puncture site may be bruised in appearance

Remove any pieces of spines

Treat itching with Hydrocortisone

Use antibiotic ointment (e.g. Neosporin) to prevent infection

Watch for signs of toxic reactions

- Weakness, muscle aches, intense fatigue, shock, paralysis



Stingrays



Stingray First Aid



Bathe wound in seawater while removing pieces of spine

- DO NOT remove from neck, chest, or abdomen

Get patient out of water and control bleeding

Soak wound in hot water

- Inactivates venom
- Limit to 90 min. to prevent burning skin

Clean wound, apply dressing

Go to the ER



Eels



Eel Bites



Eels are shy, but will bite if threatened

Teeth are very sharp and point posteriorly

Get patient out of the water

Control Bleeding

Identify the particular eel type if possible

NPO

NO MEDS unless directed by a physician



Scorpion Fish



Often Hard to Spot



Scorpion Fish First Aid



Get patient out of water, note time of sting

Remove stinger using stiff object (e.g. credit card), or tweezers

Soak wound in hot water

Control bleeding

NPO

NO MEDS unless directed by physician



Lion Fish



Lion Fish Sting



Remove spine debris

Clean and disinfect wound

Control bleeding

Benadryl and ibuprofen may be used

Apply heat (avoid cold)



Lion Fish Stings



Florida Venomous Snakes



Eastern Coral Snake

Cottonmouth/Water Moccasin

Eastern Diamondback Rattlesnake

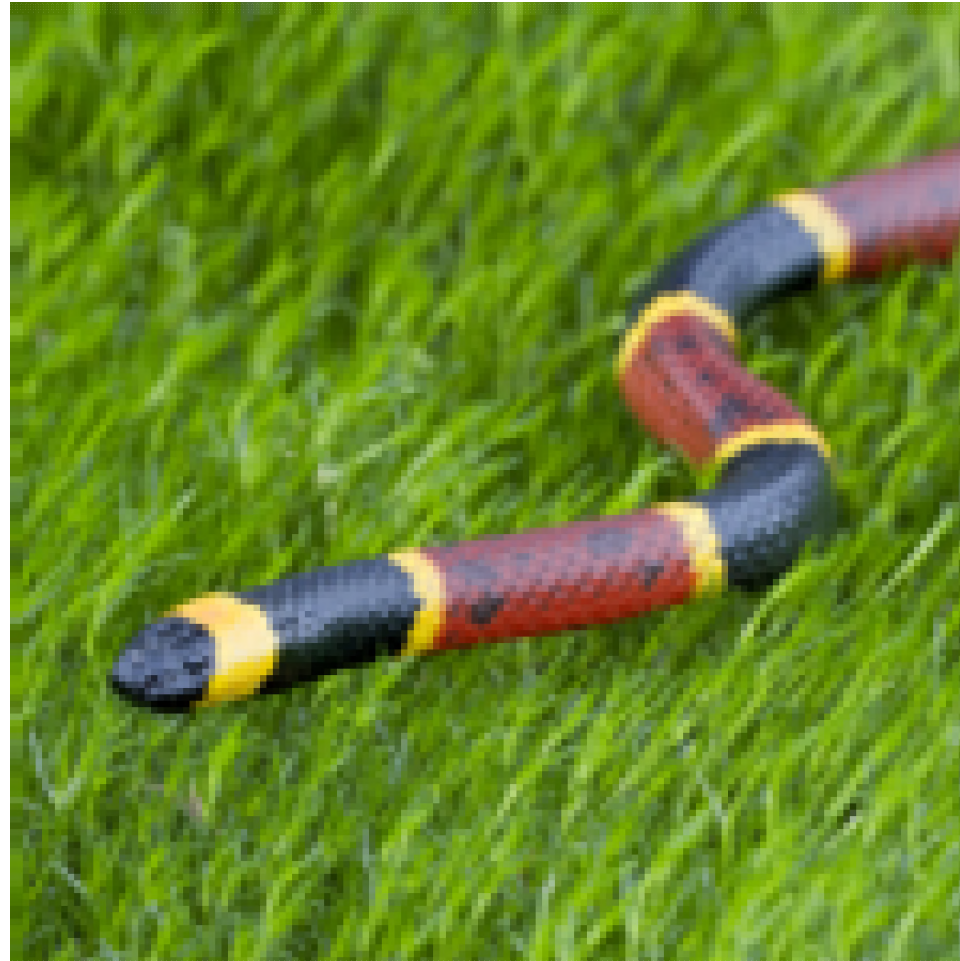
Pygmy Rattlesnake

Canebrake (Timber Rattlesnake)

Copperhead



Eastern Coral Snake



Cottonmouth / Water Moccasin



Eastern Diamondback Rattlesnake



Pygmy Rattlesnake



Canebrake / Timber Rattlesnake



Copperhead



Venomous Snake First Aid



Remove jewelry & tight clothing

Keep bite below heart

Cleanse wound

DO NOT apply tourniquet or cold/ice

DO NOT attempt to extract venom

As quickly as possible get victim to ER



Creepy Crawlies



Mosquitoes

Bees

Wasps/Hornets/Yellow Jackets

Fire Ants

Ticks



Mosquitos



Mosquito Bite First Aid



Wash area with soap and water

Apply cold compress or ice pack for 10 minutes

Apply calamine lotion or paste of baking soda and water to relieve itching

Campho Phenique is also effective in reducing pain and swelling



Bees



Wasps



Hornets



Yellow Jackets



Bee/Wasp/Yellow Jacket/Hornet First Aid



Remove Stinger (Credit card or CERT ID card works for this) if necessary

Apply ice for 20 min each hour as needed

- DO NOT apply ice directly to skin, use a towel or a cloth

Antihistamine such as Diphenhydramine or Loratadine will help with itching

Acetaminophen or Ibuprofen may be given for pain relief

Get a Tetanus booster if it has been > 10 years since you got one

Be alert for s/s of allergic reaction to sting, get medical care

DO NOT CRUSH BEE CARCASS, this will attract more bees!



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

Fire Ants



Fire Ant Sting First Aid



Hydrocortisone for itch

Apply cold compresses (20 min. on 20 min. off)

Antihistamine

Antibiotic ointment

Campho Phenique reduces swelling and alleviates itching

Watch for allergic reactions, seek medical help



Ticks



Tick Bite First Aid



GENTLY & CAREFULLY remove the tick

- Use pointed tweezers
- Grasp tick by the head and pull straight up, do not jerk

Clean area with soap & water, Isopropyl alcohol, or betadine

You might want to save tick in a container in the freezer

Otherwise get rid of it

- Drown in isopropyl alcohol or soapy water
- Flush it down the toilet
- Wrap in tape and discard in garbage
- DO NOT crush it (can spread diseases)

Watch for allergic reactions



Anaphylaxis



- Calm the individual
- If possible, find and help administer a patient's Epi-pen
 - Many severe allergy sufferers carry one at all times
- Do not administer medicine aside from the Epi-pen
 - This includes pain relievers, allergy medicine, etc.



PM 3-18

Head-to-Toe Assessment

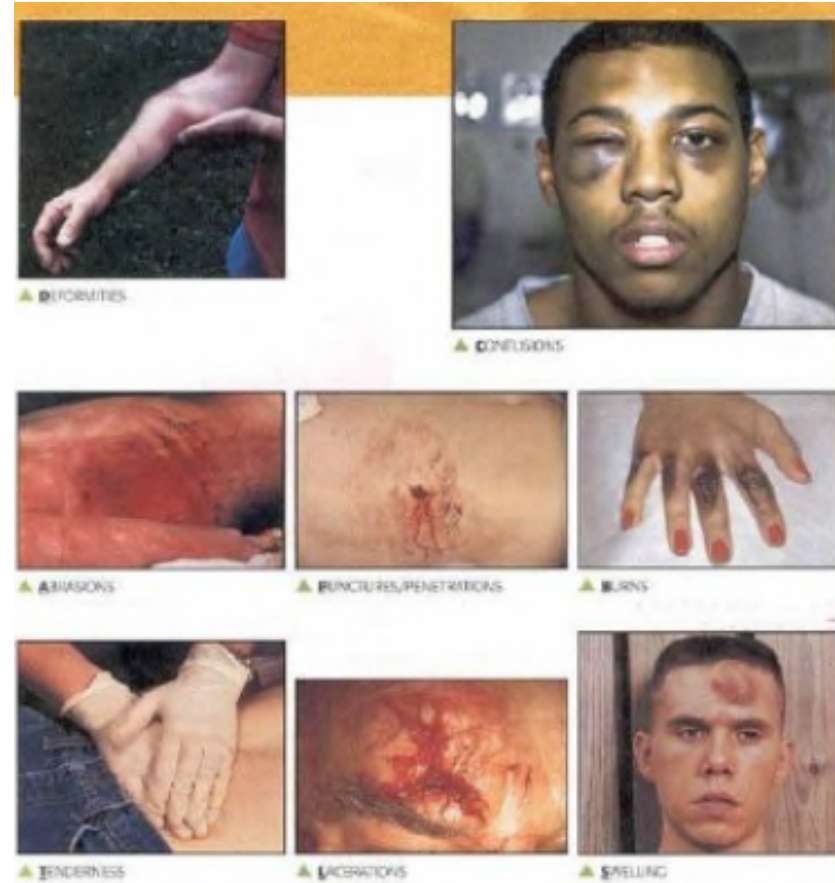
- Objectives of head-to-toe assessment:
 - Determine extent of injuries
 - Determine type of treatment needed
 - Document injuries



PM 4-7

DCAP-BTLS

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



PM 4-8

Conducting Head-to-Toe Assessment



- Pay careful attention
- Look, listen, and feel
- Suspect a spinal injury in unconscious survivors and treat accordingly
- Check own hands for patient bleeding

Order of Assessment

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



PM 4-8

Closed-Head, Neck, Spinal Injuries



- If injuries to the head or spine are suspected, **do no harm**
 - Minimize movement of head and neck while treating life-threatening conditions
- If survivors exhibit signs or are found under heavy debris, treat them as having a closed-head, neck, or spinal injury

Role of CERT Volunteers



- Once responders have arrived, provide them with detailed information from your size-up. Ask how you may be of assistance
 - For your safety, first responders may ask you to leave the area. Report the incident and your role to your CERT Team Leader and local agency CERT affiliation
- Communication is key for supporting first responders



Questions

