

Bone, Joint, and Muscle Injuries

Review anatomy on your own

Injuries to Muscles and Bones

- First responders encounter many types of musculoskeletal injuries.
- Providing proper care at the scene can prevent additional injury and disability.

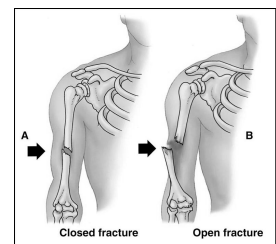


Mechanism of Injury

- How injuries occur
- Causes of musculoskeletal injuries:
 - Direct force
 - Indirect force
 - Twisting force
- PSDE =

Types of Fractures

- Closed
- Open

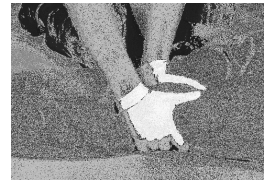


Sx of musculoskeletal injuries

- Pain & tenderness at injury site
- Swelling
- Grating
- Deformity or angulations
- Discoloration
- Exposed bone ends
- Joints locked in place
- Inability to move extremity

Assessment of a Fx

- Bleeding
- Bruising
- Look and Feel for D-O-T-S



First Aid for a Fracture

1. Check and treat ABC
2. Determine how injury occurred and location of injury
3. Expose injured area
4. Examine using D-O-T-S

Exam of an Injured Limb

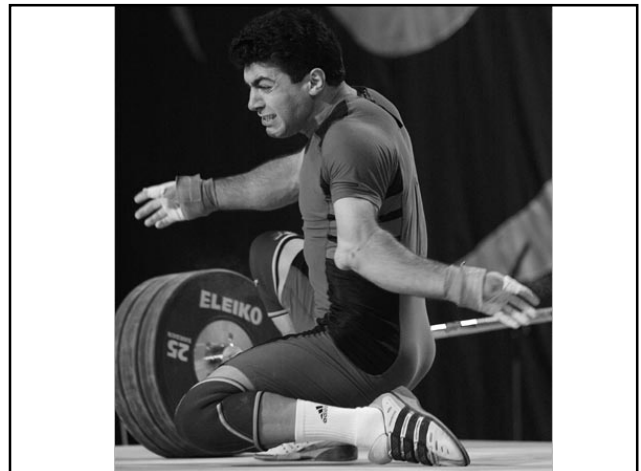
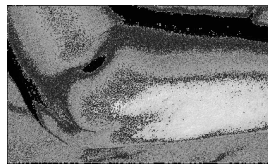
- Check the extremity for:
 - Pulse
 - Capillary refill
 - Sensation
 - Movement
- Use RICE procedures
- Use splint to stabilize
- Seek medical attention



(2 of 2)

Types of Joint Injuries

- Dislocations
- Sprains



First Aid for Joint Dislocations

- Check the CSM
- Use the RICE procedure
- Splint the joint in the position found
- Do not reduce the joint
- Seek medical attention

First Aid for Joint Sprains

- Use the RICE procedure
 - Rest
 - Ice
 - Compression
 - Elevation

Types of Muscle Injuries

- Strains
- Contusions
- Cramps

1st Aid for Muscle Strains & Contusions

Use the RICE procedure to treat muscle strains and contusions

- Rest
- Ice
- Compression
- Elevation

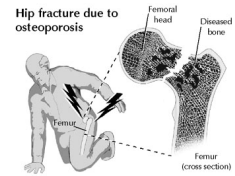


1st Aid for Muscle Cramps

- Have victim gently stretch muscle
- Apply pressure
- Apply ice
- Drink lightly salted water or a commercial sports drink

Hip Injuries

- Hip fractures
 - Occur at the upper end of the femur
 - Osteoporosis causes bones to become more fragile.
- Dislocated hips
 - Extremely painful



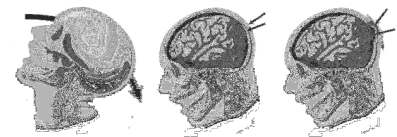
Injuries of the Thigh

- A fractured femur is very unstable and usually produces significant deformity.
- Often much bleeding and swelling
- Treat for shock and help prevent further injury.



Injuries to the Head

- Common causes of death, paralysis, and permanent brain injury
- May occur from many different kinds of trauma



- Show ESPN video
- <http://sports.espn.go.com/broadband/video/videopage?videoid=3094263&categoryId=2378529&n8pe6c=2>

Signs and Symptoms of concussion

- Confusion
- Unusual behavior
- Unconsciousness
- Decreasing consciousness
- Nausea or vomiting
- Unequal pupils
- Paralysis
- Seizures

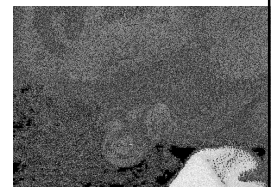
Rx of Head Injuries

- Stabilize head in a neutral position.
- Maintain an open airway using the jaw-thrust technique.
- Support patient's breathing.
- Monitor circulation.

(1 of 2)

Treatment of Head Injuries

- Check to see if CSF or blood is seeping from wound, nose, or ears.
- Control bleeding.
- Examine and treat other serious injuries.
- Arrange for prompt transport.



Treatment of Facial Injuries

- Stabilize head in a neutral position.
- Maintain an open airway.
- Support breathing as needed.
- Monitor circulation.
- Control bleeding.
- Look for and stabilize other serious injuries.
- Arrange for prompt transport.

Injuries to the Spine

- Mechanisms of injury
 - Pressure on spinal cord from displaced vertebrae, swelling, or bleeding
 - Cord is severed, resulting in paralysis.
 - Gunshot wounds
 - Falls, motor vehicle collisions, and stabbing

(1 of 2)

Injuries to the Spine



A. Pressure on the spinal cord from swelling or fracture.

B. Bruising of the spinal cord by broken vertebrae.

C. Injury by displacement of vertebrae.

(2 of 2)

Signs and Symptoms of Spinal Injuries

- Laceration, bruise, or other sign of injury to head, neck, or spine
- Tenderness
- Extremity weakness, paralysis, or loss of movement

Treatment of Spinal Injuries

- Stabilize head and neck in neutral position.
- Maintain an open airway.
- Support patient's breathing.

(1 of 2)

Treatment of Spinal Injuries

- Examine and treat other serious injuries.
- Do not move patient.
- Assist in immobilizing pt onto a longboard.
- Arrange for prompt transport

(2 of 2)

Motorcycle and Football Helmets

- In most instances, helmets do not have to be removed.
- Only remove helmet if:

(1 of 2)

Motorcycle and Football Helmets

- If you remove a football helmet, you should also remove the shoulder pads.
- You may have to provide extra padding to maintain neutral position.



(2 of 2)