

Sports Medicine & Science Department

National Olympic Academy of
I.R. IRAN



Sports Medicine & Science Department

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Primary Care in Sports Injuries

Medical Education Centre



Sports Field Injuries

- Critical Injuries

- Traumatic Injuries

- Fractures & Dislocations

- Skin Ruptures (Wounds)

- Soft tissue bleeding

- Ligament injuries (Sprains)

- Tendon Injuries

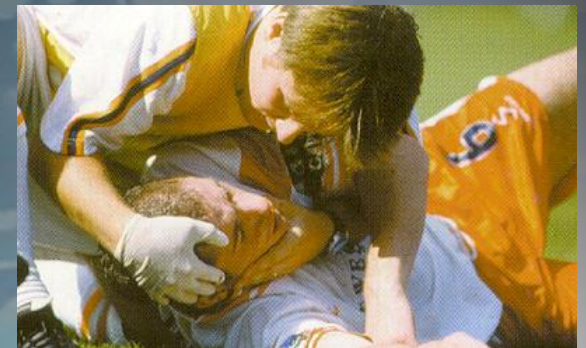
- Muscle injuries (Strains) (Contusions) (Cramps)

- Nerve injuries



Sports Field Injuries

- Critical Injuries



Duties in First Aids

- Shouting for help
- Approach with Care
- Free of danger
- Evaluation of ABC
 - A: Air way
 - B: Breathing
 - C: Cardiac
- (Basic life support)





Approach safely

Check response

Shout for help

Open airway

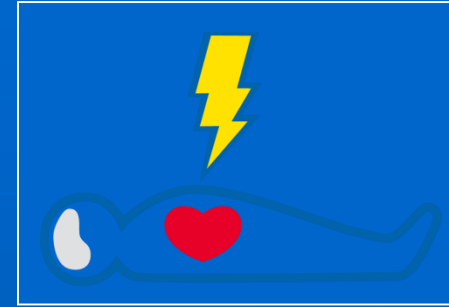
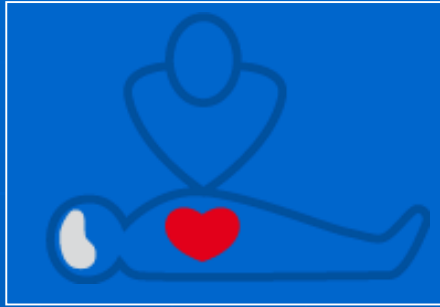
Check breathing

Call 112

30 chest compressions

2 rescue breaths





Approach safely

Approach safely

Check response

Check response

Shout for help

Shout for help

Open airway

Open airway

Check breathing

Check breathing

Call 112

Call 112

30 chest compressions

Attach AED

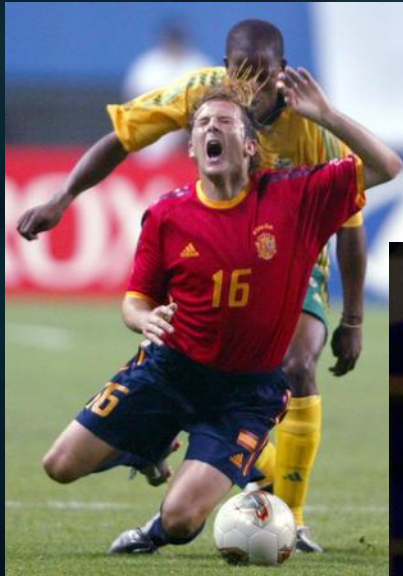
2 rescue breaths

Follow voice prompts



Sports Field Injuries

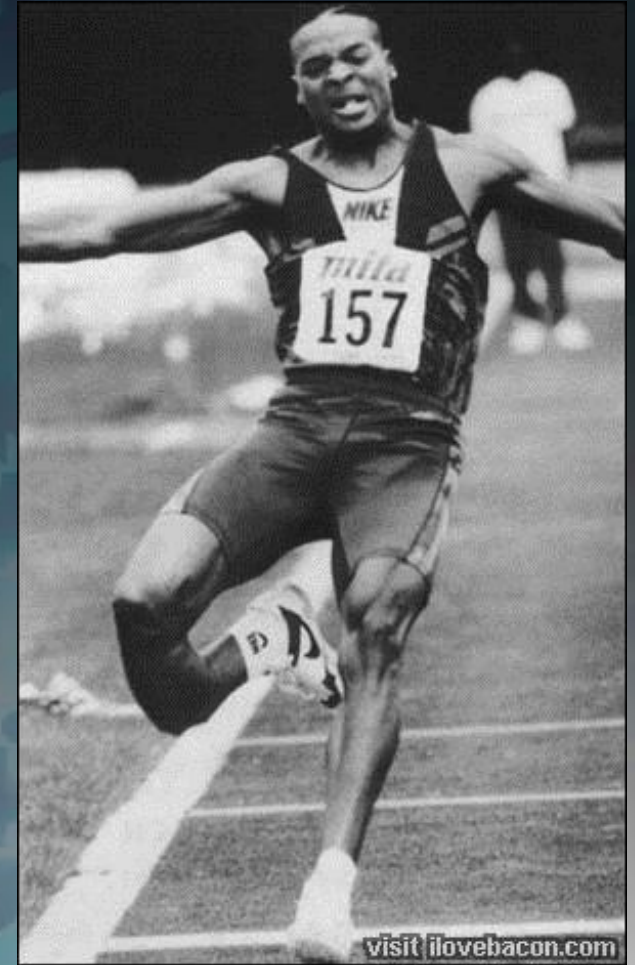
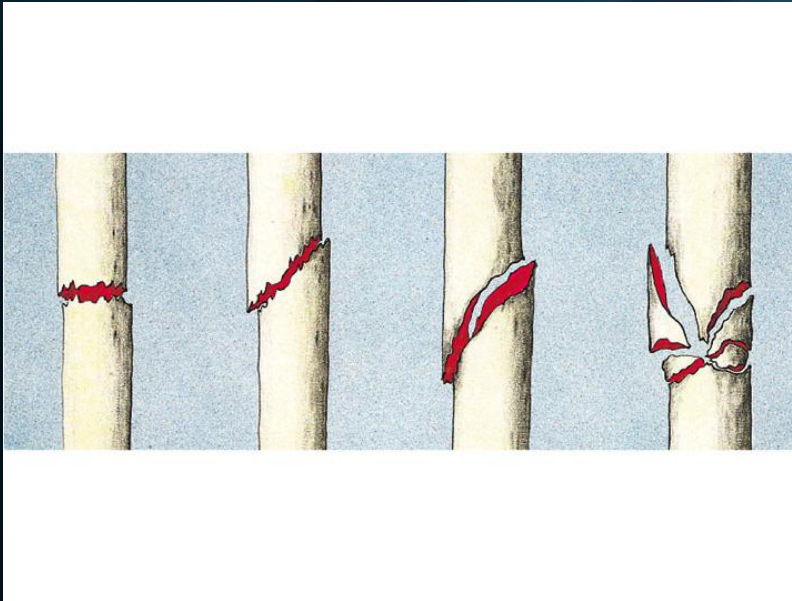
- Traumatic Injuries





Sports Field Injuries

● Fractures



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Sports Field Injuries

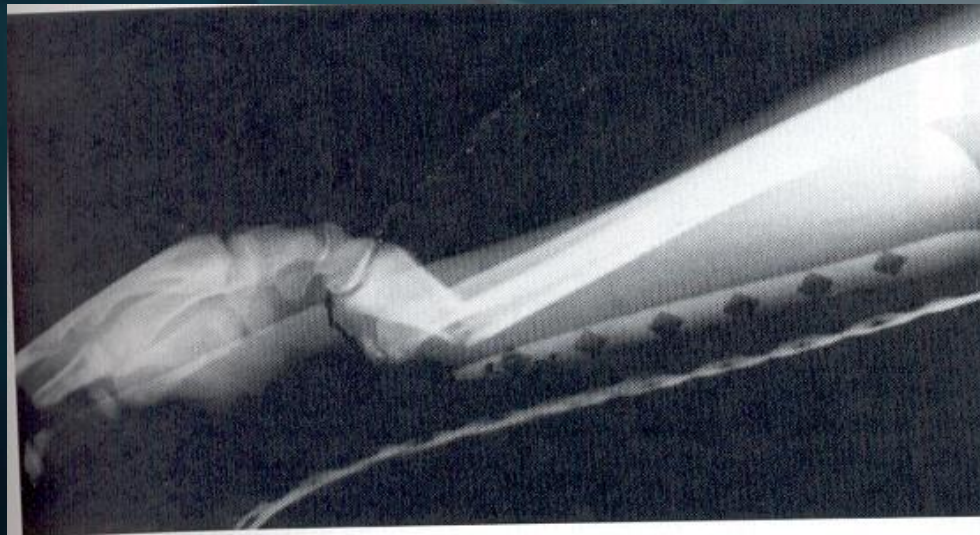
● Fractures





Sports Field Injuries

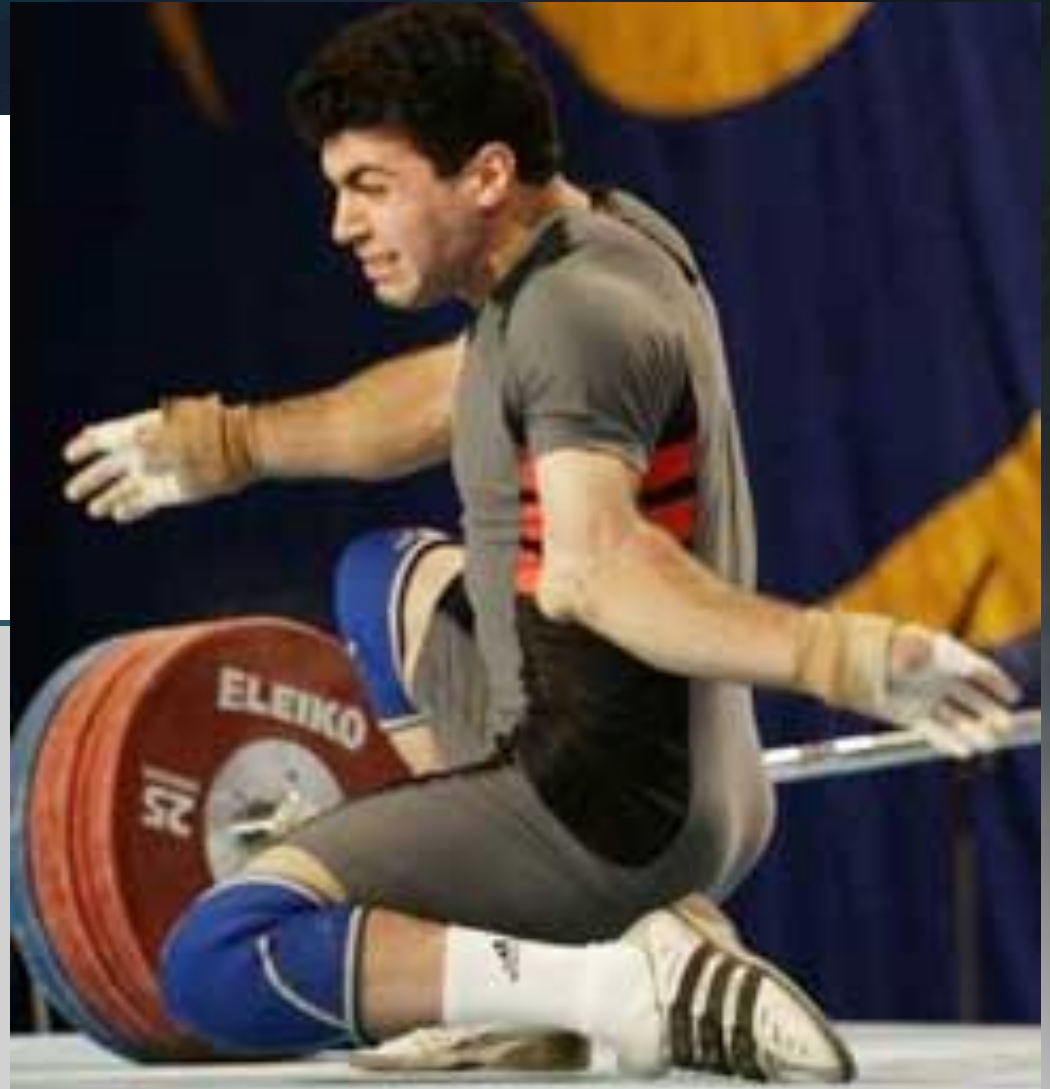
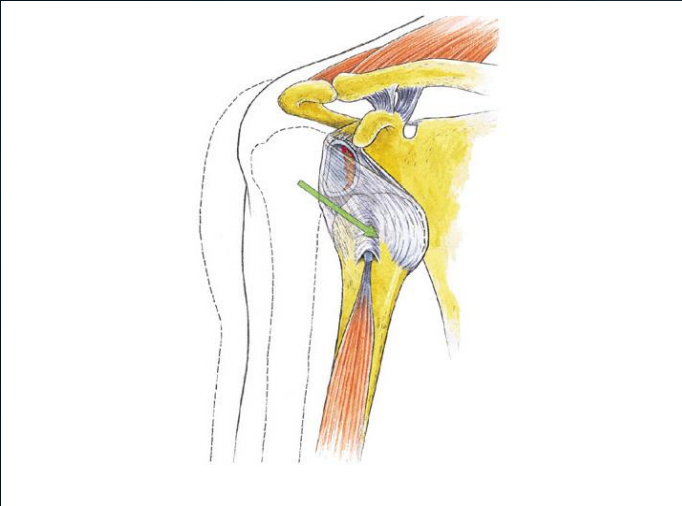
● Fractures





Sports Field Injuries

● Dislocation





Sports Field Injuries





Sports Field Injuries

● Dislocation

Posterior Elbow Dislocation



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Sports Field Injuries

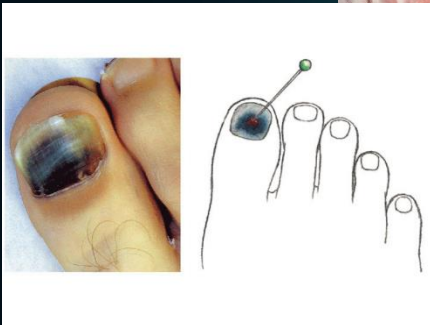
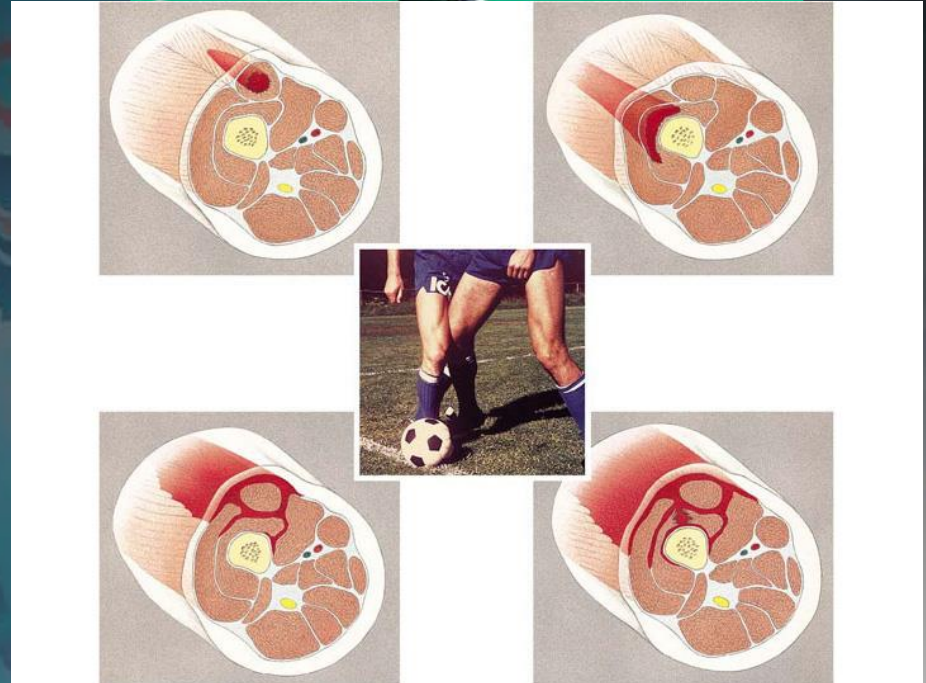
● Skin Ruptures





Sports Field Injuries

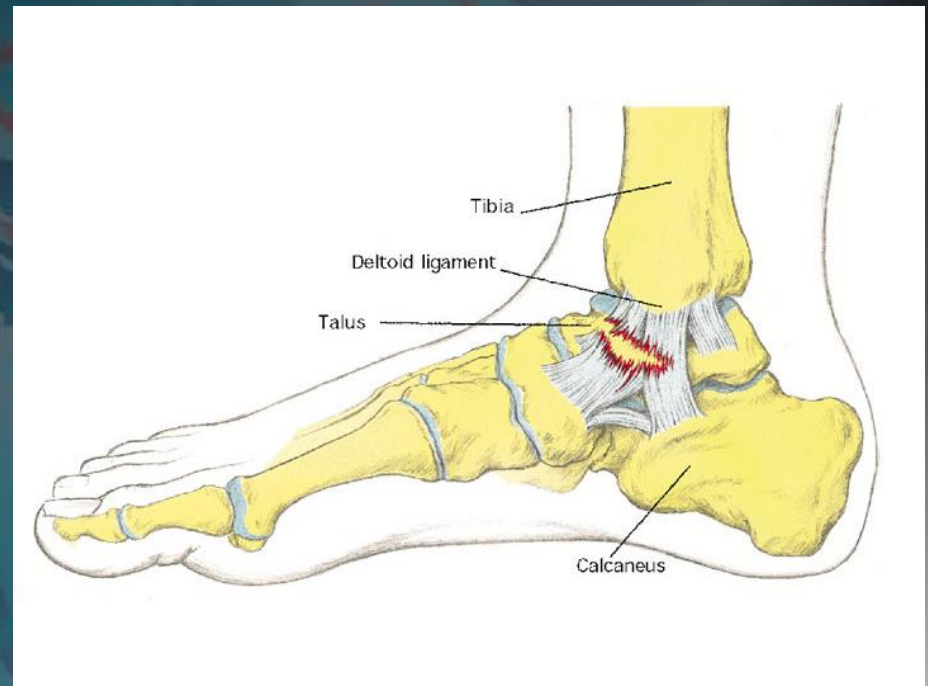
● Soft Tissue Bleeding





Sports Field Injuries

● Ligament Injuries



Ligament

- Grade
- I: Some stretched fibers
- II: Proportion of fibers
- III: Complete tear

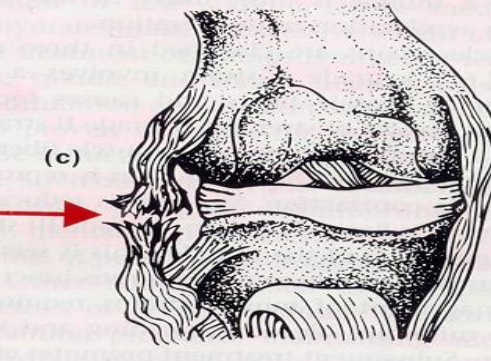
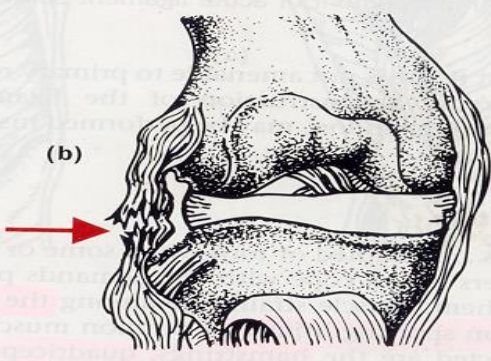
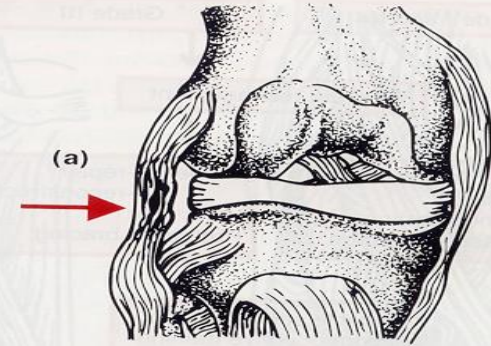
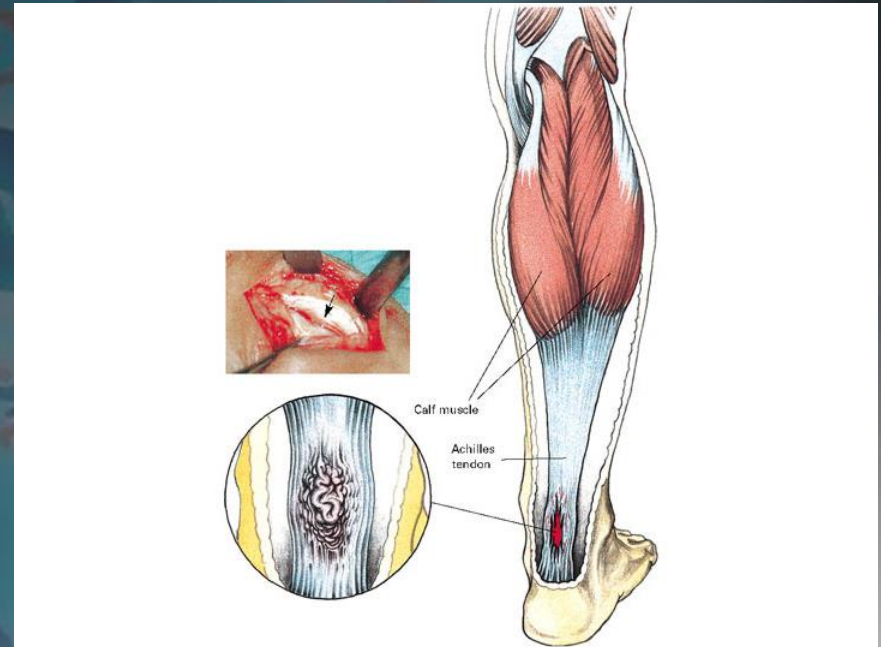


Fig. 2.4 Ligament sprains
a) Grade I
b) Grade II
c) Grade III



Sports Field Injuries

● Tendon Injuries



Tendon

A) Partial

B) Complete

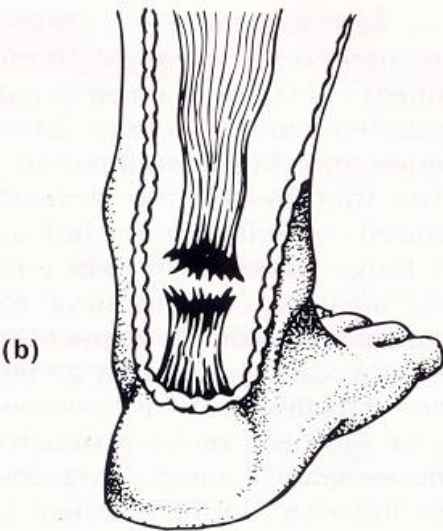
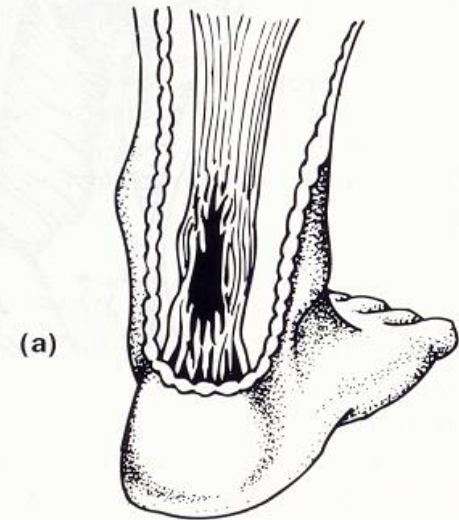
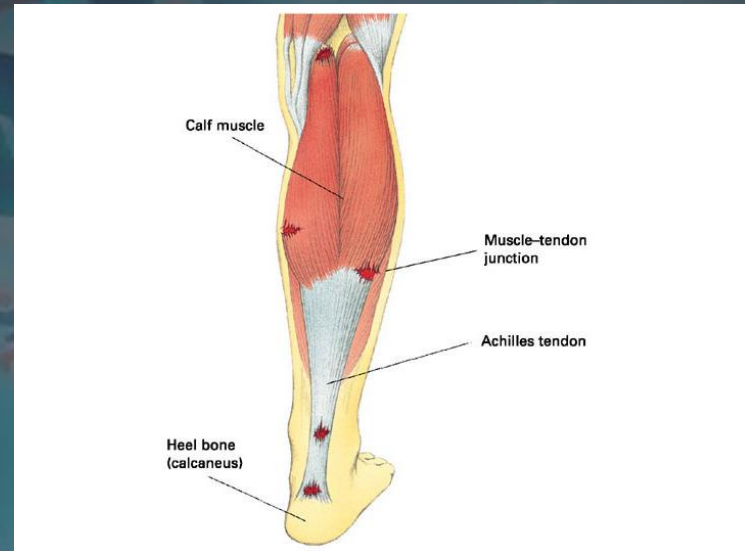
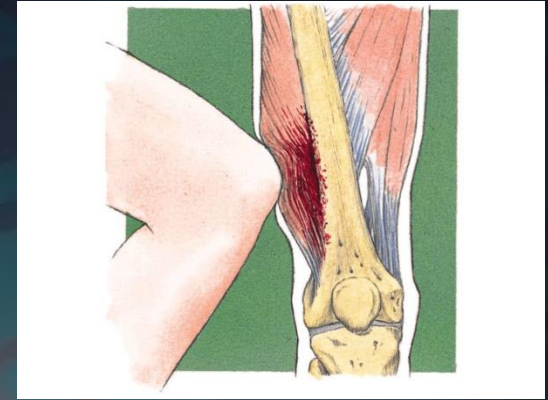
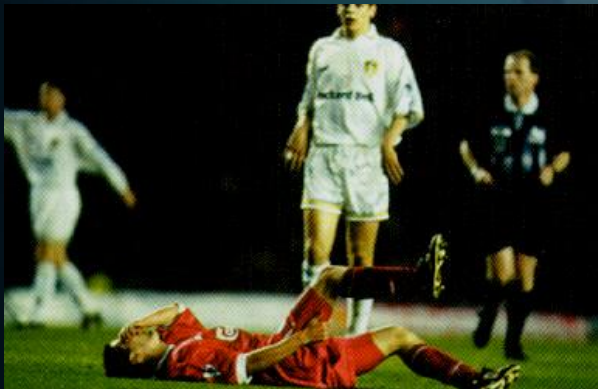


Fig. 2.7 Tendon rupture
(a) Partial
(b) Complete



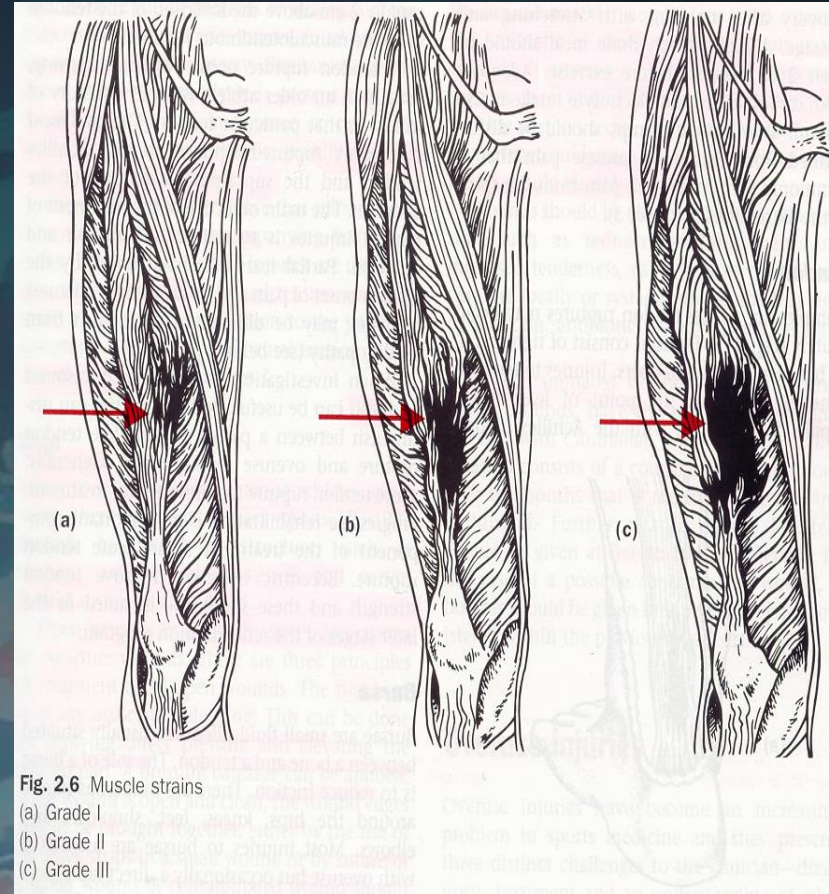
Sports Field Injuries

● Muscle Injuries



Muscle

- A- Strain/Tear
- Grade I: some fibers
- II: Significant fibers
- III: Complete tear
- B- Contusions
- C- Cramps

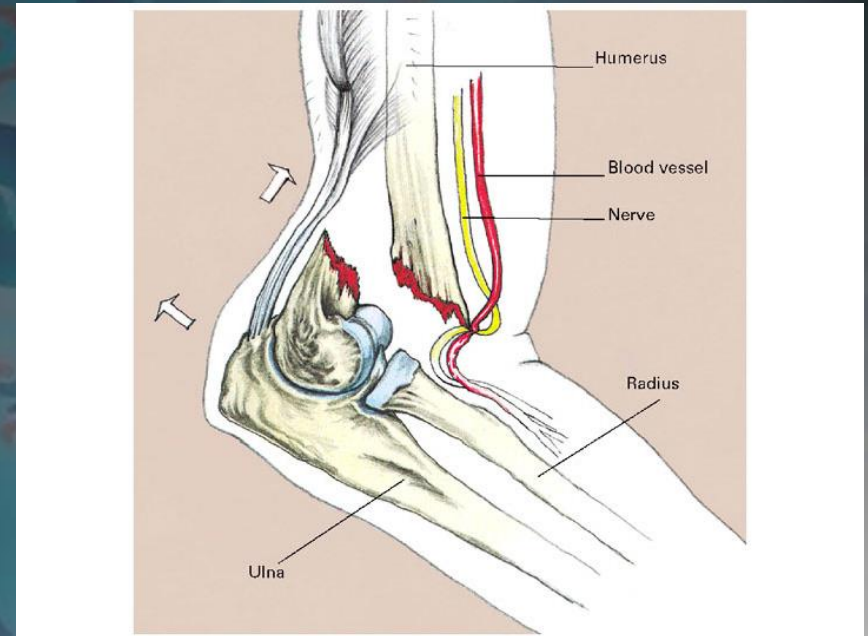
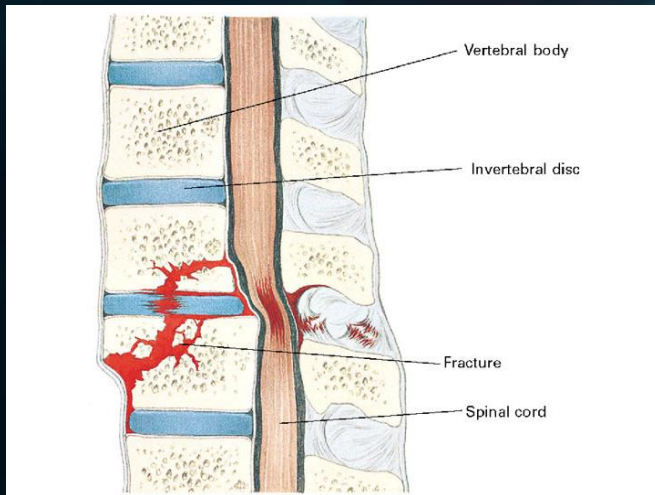






Sports Field Injuries

● Nerve injuries





Treatment sequences in Sports Injuries

- Check for the critical situations
- Control of acute phase
- Treatment of injury
- Rehabilitation
- Biomechanical correction
- Technique correction



Principle of treatment:

- 1- Minimize the extent of initial damage
- 2- Reduce associated pain and inflammation
- 3- Promote healing of damage tissue.
- 4- Maintain flexibility, strength, proprioception & overall fitness during the healing phase
- 5- Functionally rehabilitate the injured athlete to enable return to sport
- 6- Assess and correct any predisposing factors to reduce the likelihood of recurrence



Sports Injuries

Trauma



Bone fracture / Soft tissue rupture



Bleeding



Inflammation



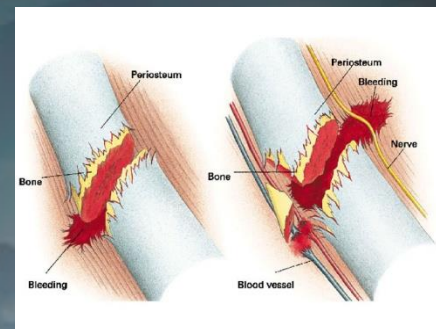
Pain

Swelling

Heat

Redness

Loss of function





Primary Cares in Sports Injuries

PRICED

- Protection
- Rest
- Ice
- Compression
- Elevation
- Drugs



Primary Cares in Sports Injuries

P R I C E

Protection





Primary Cares in Sports Injuries

PRICE

Rest

- Cease activity
- Crutches
- Slings





Primary Cares in Sports Injuries

PRICE

Reduce Pain

- Decreases pain (analgescic)

Vasoconstriction

- Reduce bleeding
- Reduce BMR of tissue demands on O₂ & Nutrients)
- Decrease Inflammation
- Decrease muscle spasm
- Leave in place for at least **72** hours





Primary Cares in Sports Injuries

PRICE

Compression

- Reduce bleeding & swelling
- During & After ice
- Not so tightly
- Distal to proximal
- Leave in place for at least 72 hours





Primary Cares in Sports Injuries

PRICE

- Reduces internal bleeding
- Eliminates the effects of gravity on blood pooling in the extremities
- Assists the veins in returning blood to the heart
- Elevate as much as possible in first **72** hours

Elevation

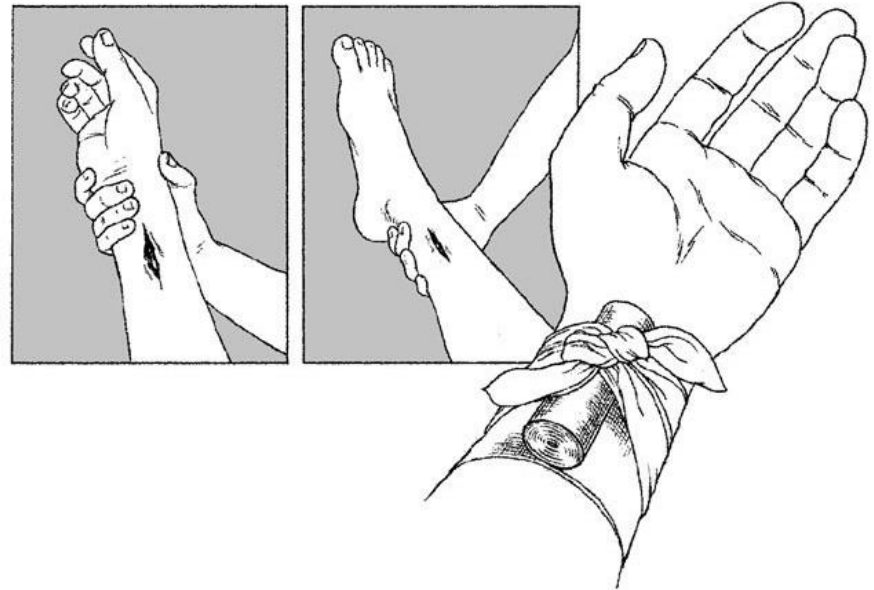




Primary Cares in Sports Injuries

PRICE

Bleeding





Primary Cares in Sports Injuries

P R I C E D

Drugs

NSAIDs



Contraindications in the first 24 hours:

- Heat
- Heat rub
- Alcohol
- Moderate/intense activity
- Vigorous massage





Thank you for your
attention.

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