



Sports Medicine & Science Department

National Olympic Academy
of I.R. IRAN

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Primary Care in Sports Injuries

Medical Education Centre

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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

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Sports Field Injuries

- Critical Injuries



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Duties in First Aids

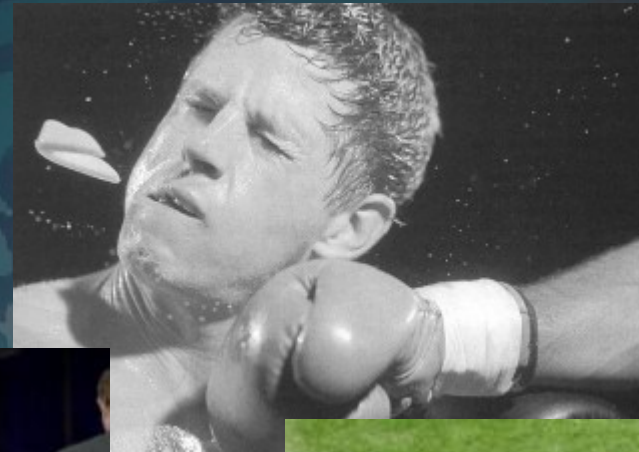
- Shouting for help
- Approach with Care
- Free of danger
- Evaluation of ABC
 - A: Air way
 - B: Breathing
 - C: Cardiac
- (Basic life support)





Sports Field Injuries

- Traumatic Injuries

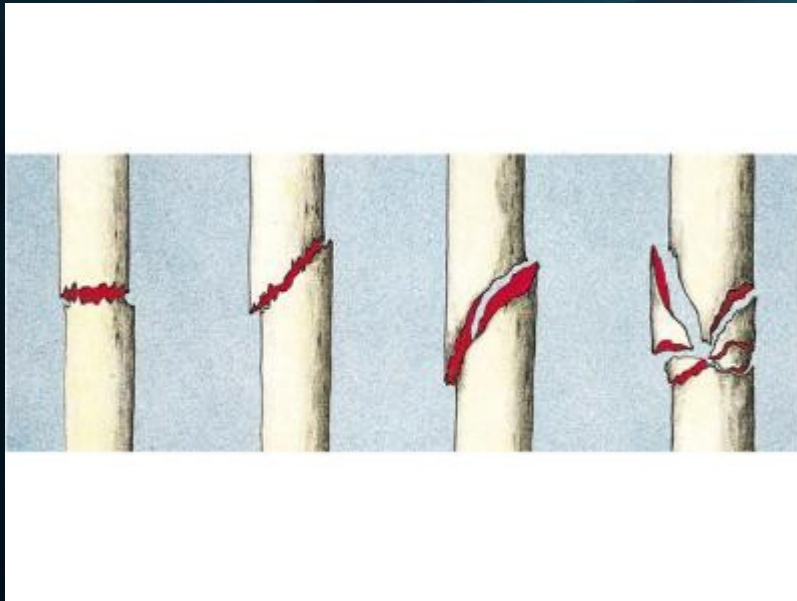


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Sports Field Injuries

● Fractures



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Sports Field Injuries

● Fractures



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Sports Field Injuries

● Fractures

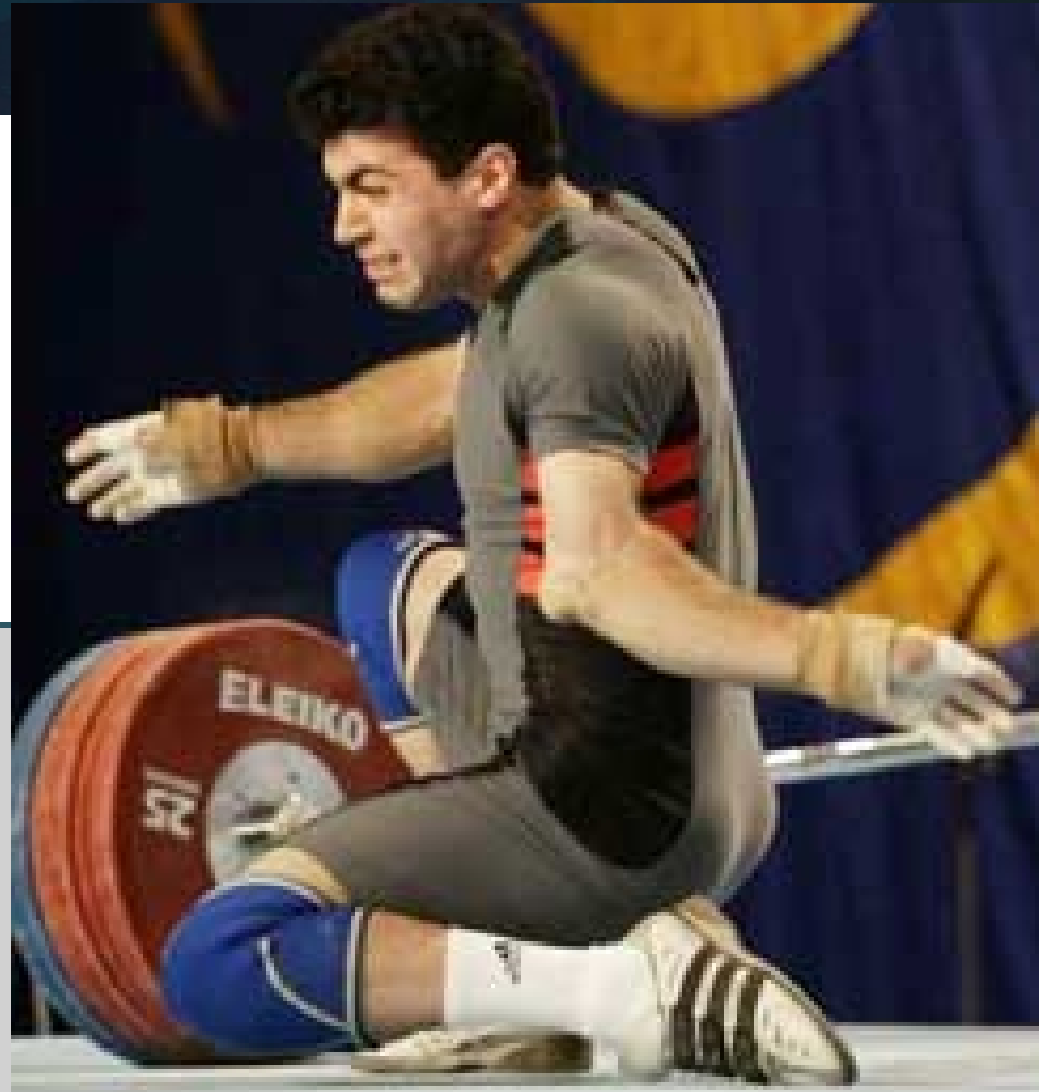


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Sports Field Injuries

● Dislocation





Sports Field Injuries



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Sports Field Injuries

● Dislocation

Posterior Elbow Dislocation



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Sports Field Injuries

- Skin Ruptures

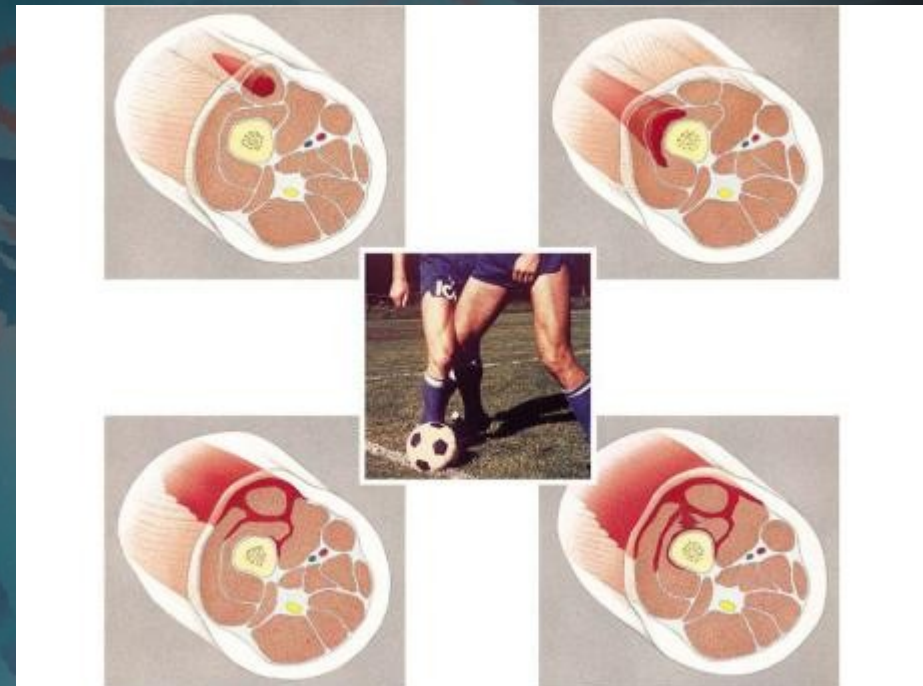
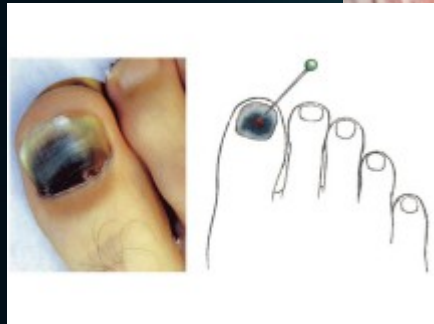


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Sports Field Injuries

● Soft Tissue Bleeding

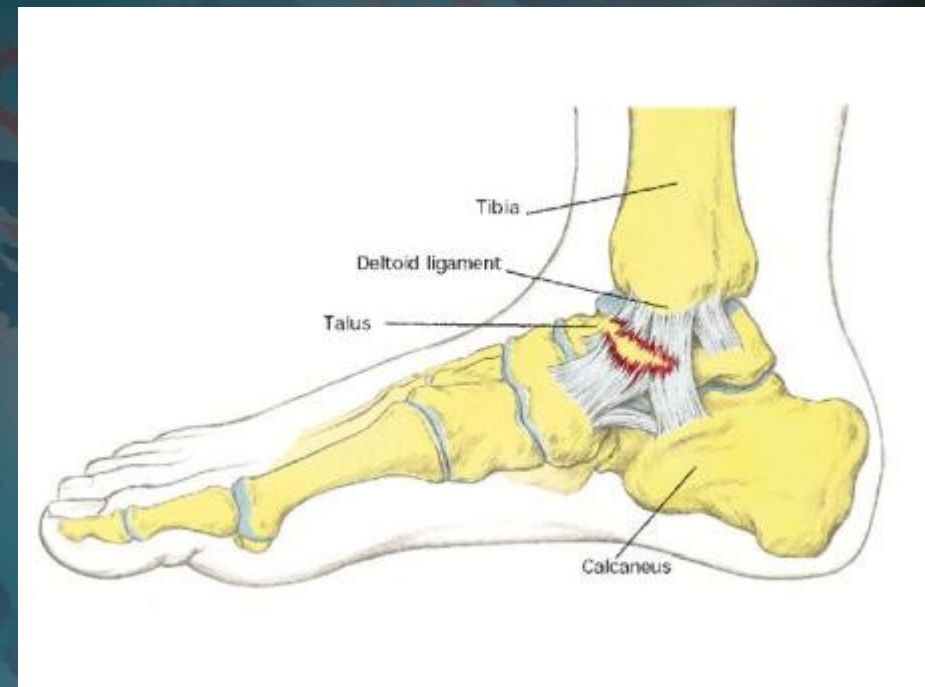


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Sports Field Injuries

- Ligament Injuries



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Ligament

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

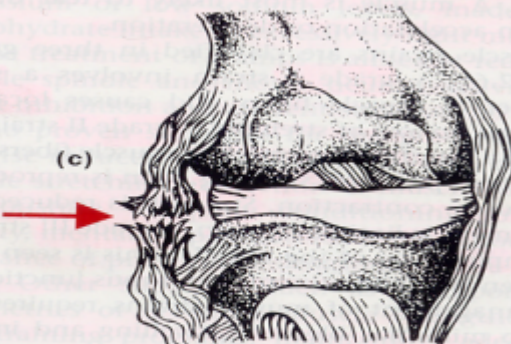
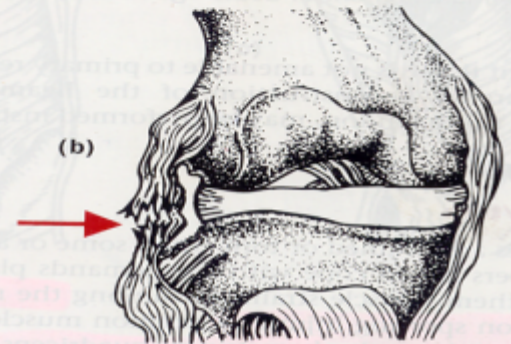
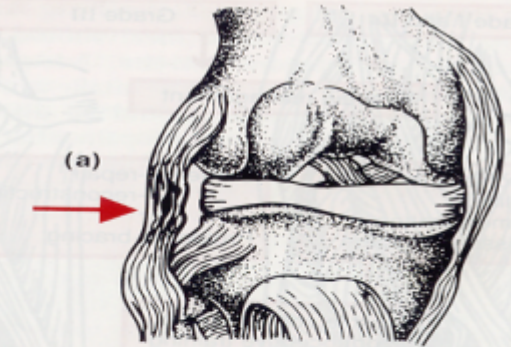
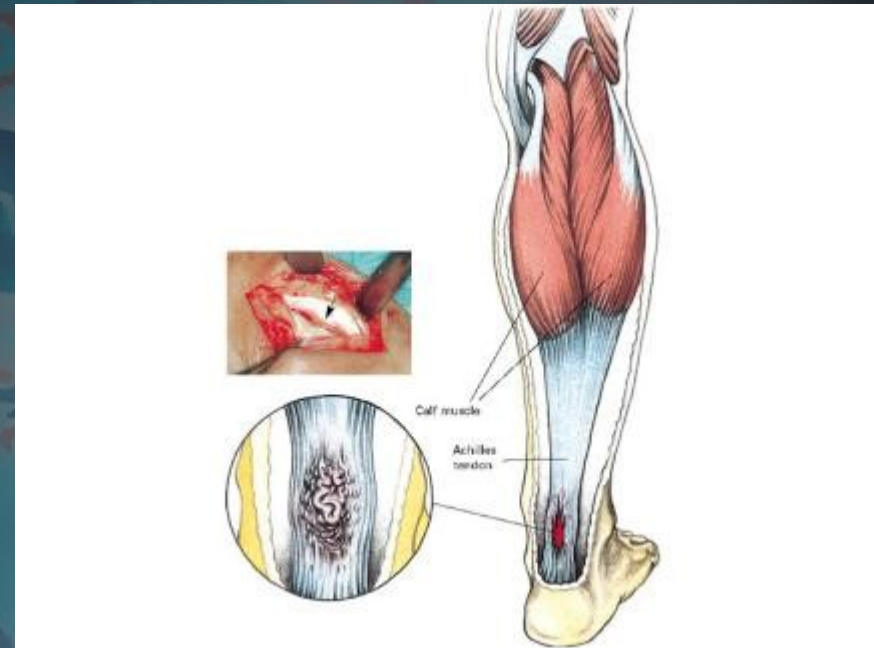


Fig. 2.4 Ligament sprains
a) Grade I
b) Grade II
c) Grade III



Sports Field Injuries

● Tendon Injuries

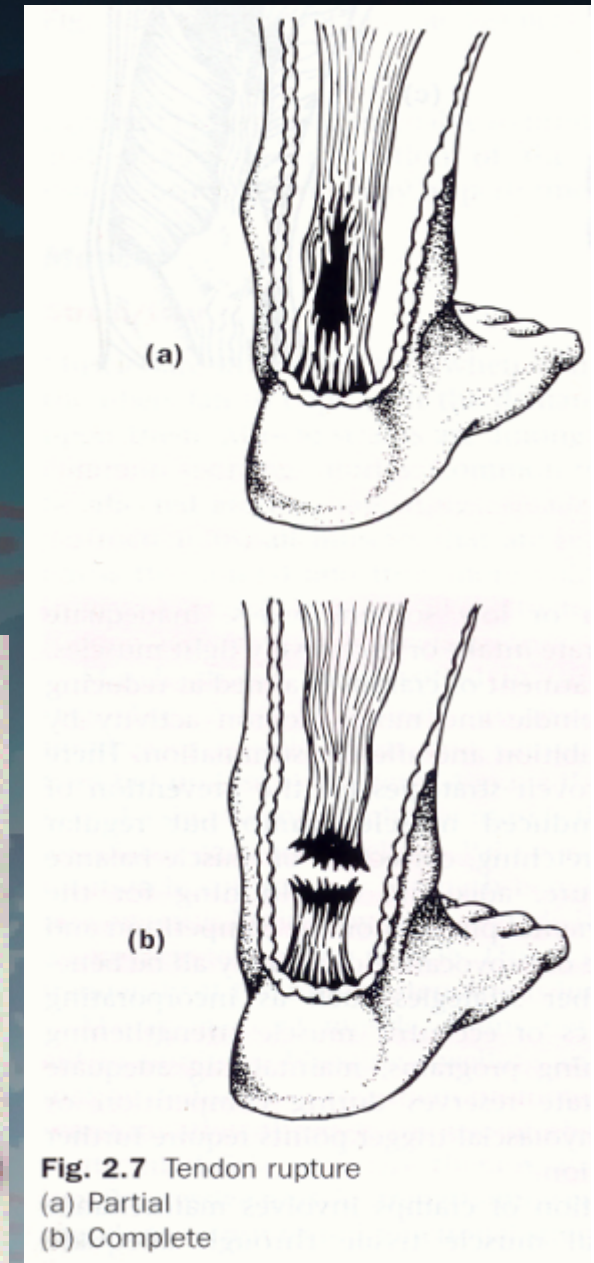


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Tendon

A) Partial

B) Complete



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Sports Field Injuries

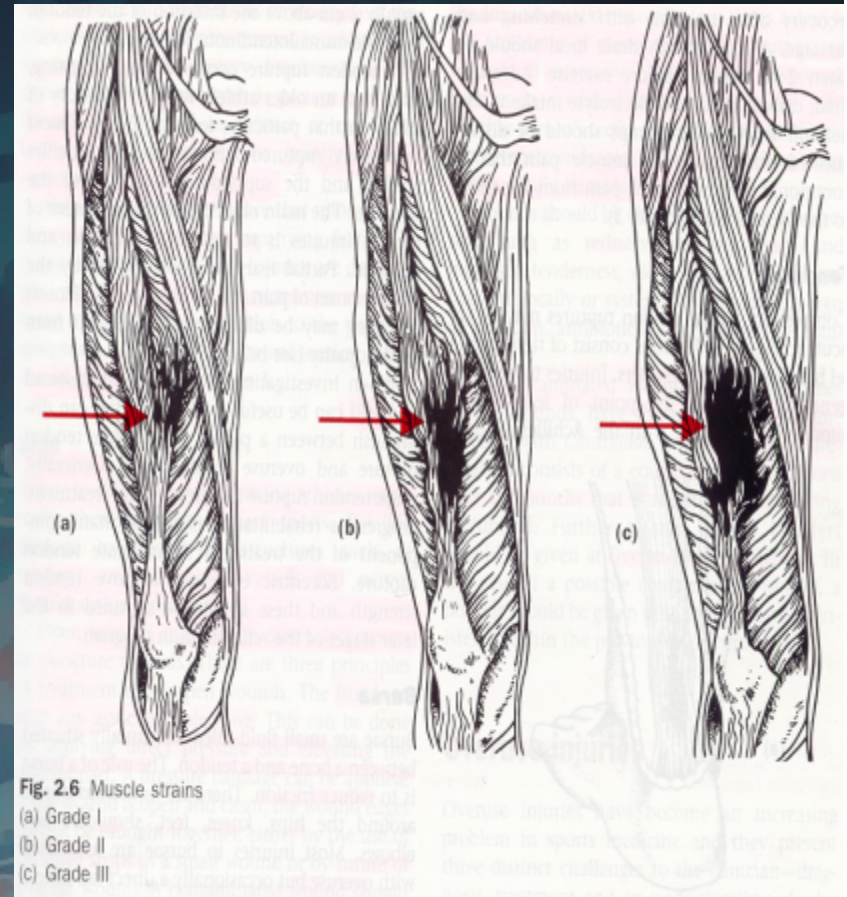
● Muscle Injuries



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Muscle

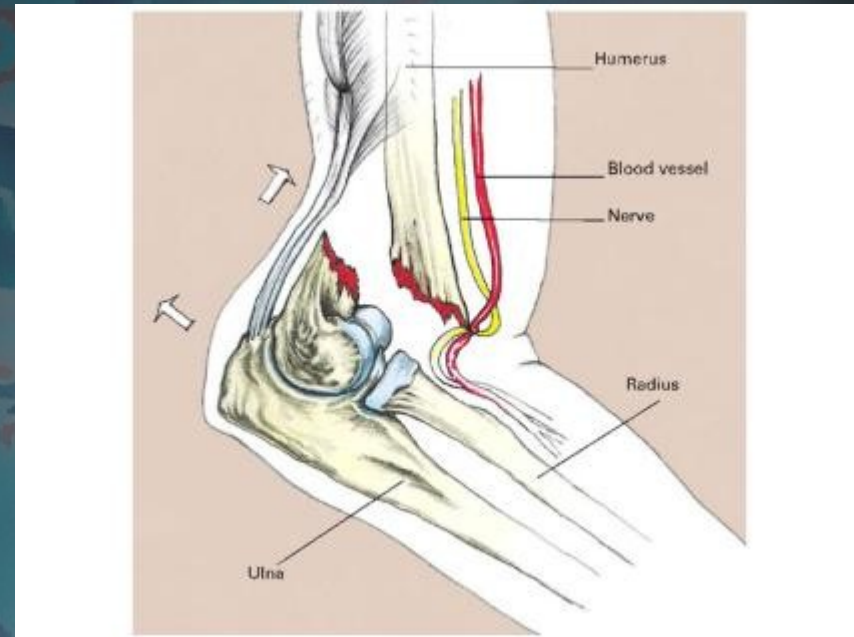
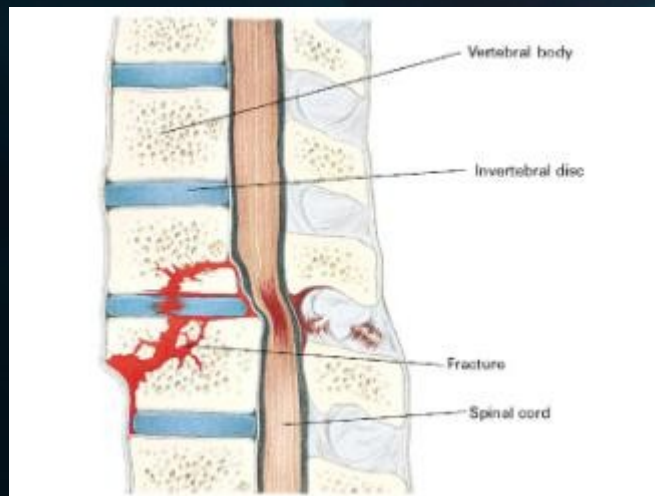
- A- Strain/Tear
- Grade I: some fibers
- II: Significant fibers
- III: Complete tear
- B- Contusions
- C- Cramps





Sports Field Injuries

● Nerve injuries



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Treatment sequences in Sports Injuries

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



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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

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Sports Injuries

Trauma

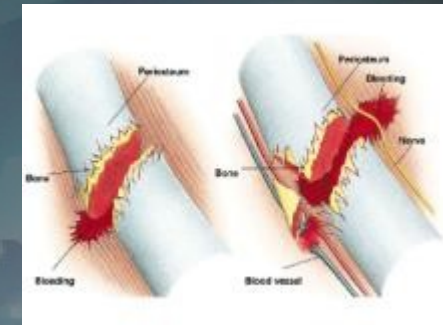


Bone fracture / Soft tissue rupture



Bleeding

Inflammation



Pain

Swelling

Heat

Redness

Loss of function



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Primary Cares in Sports Injuries

PRICE D

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

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Primary Cares in Sports Injuries

P R I C E

Protection



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Primary Cares in Sports Injuries

P R I C E

Rest

- Cease activity
- Crutches
- Slings



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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**



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Primary Cares in Sports Injuries

P R I C E

Compression

Reduce bleeding & swelling

- During & After ice

- Not so tightly

- Distal to proximal

- Leave in place for at least 72 hours



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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



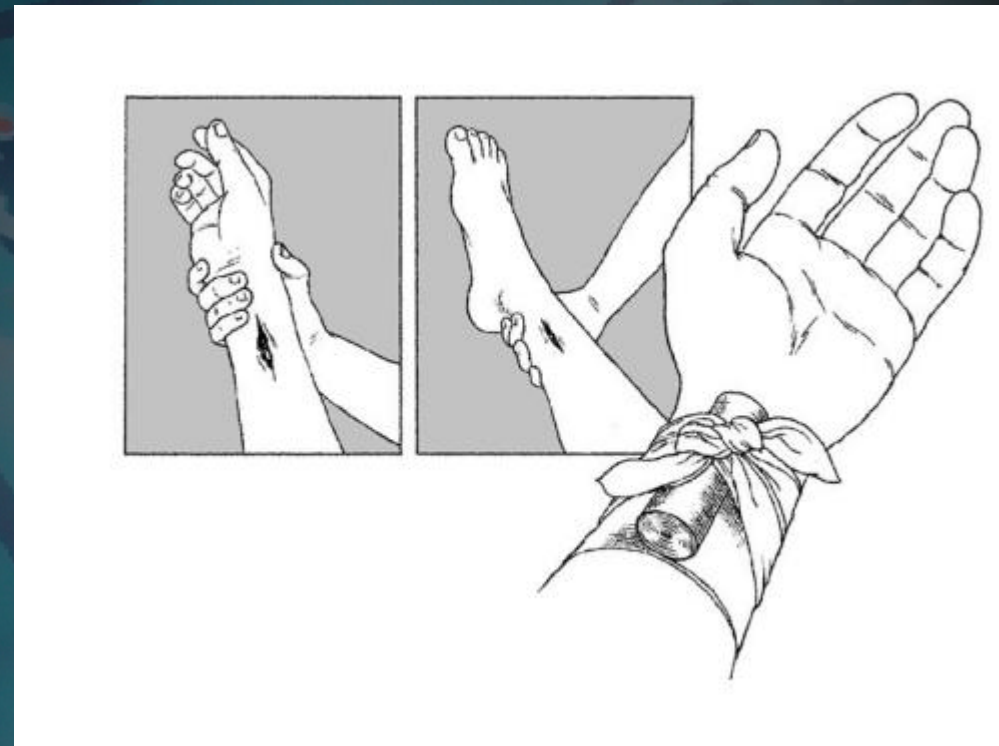
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Primary Cares in Sports Injuries

PRICE

Bleeding



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Primary Cares in Sports Injuries

P R I C E D

Drugs

NSAIDs



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Contraindications in the first 24 hours:

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



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Thank you for your
attention.

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