

Sports Medicine & Science Department

**National Olympic Academy of
I.R. IRAN**

Sports Medicine & Science Department

Dr M Taghavi

Sport physician of Olympic Academy

Mehrantaghavi49@yahoo.com



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

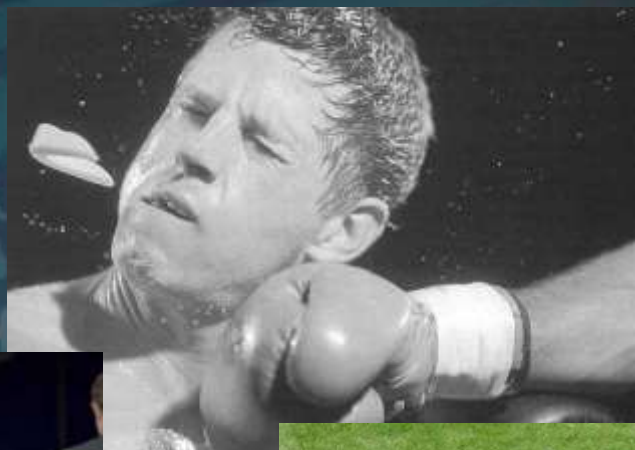
- Shouting for help
- Approach with Care
- Free of danger
- Evaluation of ABC
 - A: Air way
 - B: Breathing
 - C: Cardiac
- (Basic life support)





Sports Field Injuries

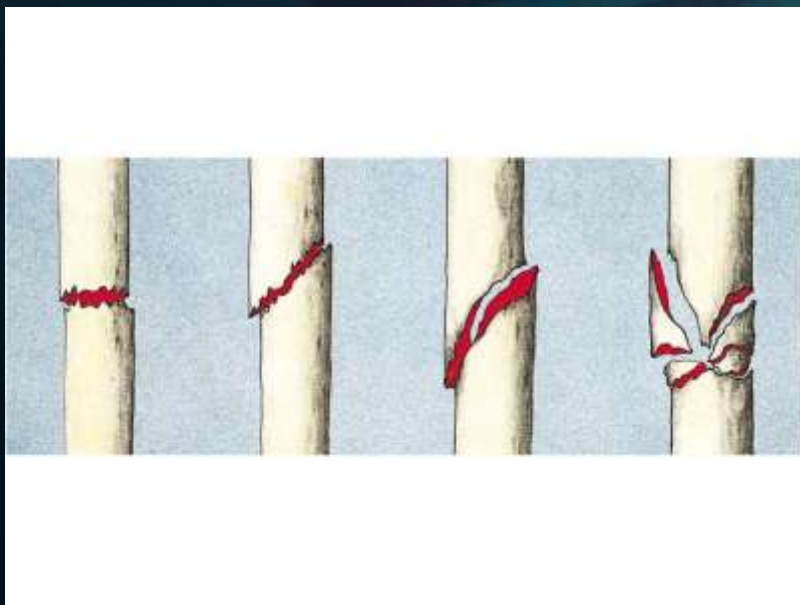
● Traumatic Injuries





Sports Field Injuries

● Fractures





Sports Field Injuries

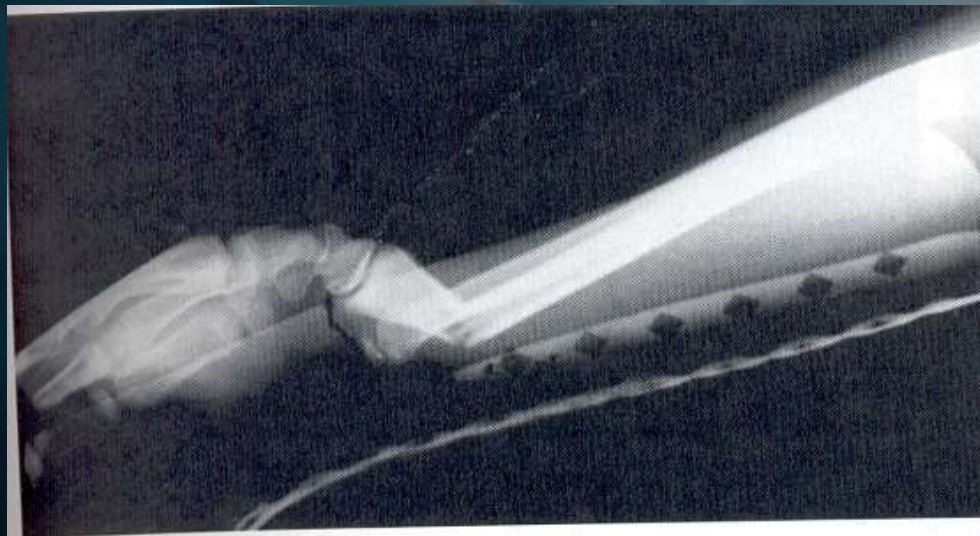
● Fractures





Sports Field Injuries

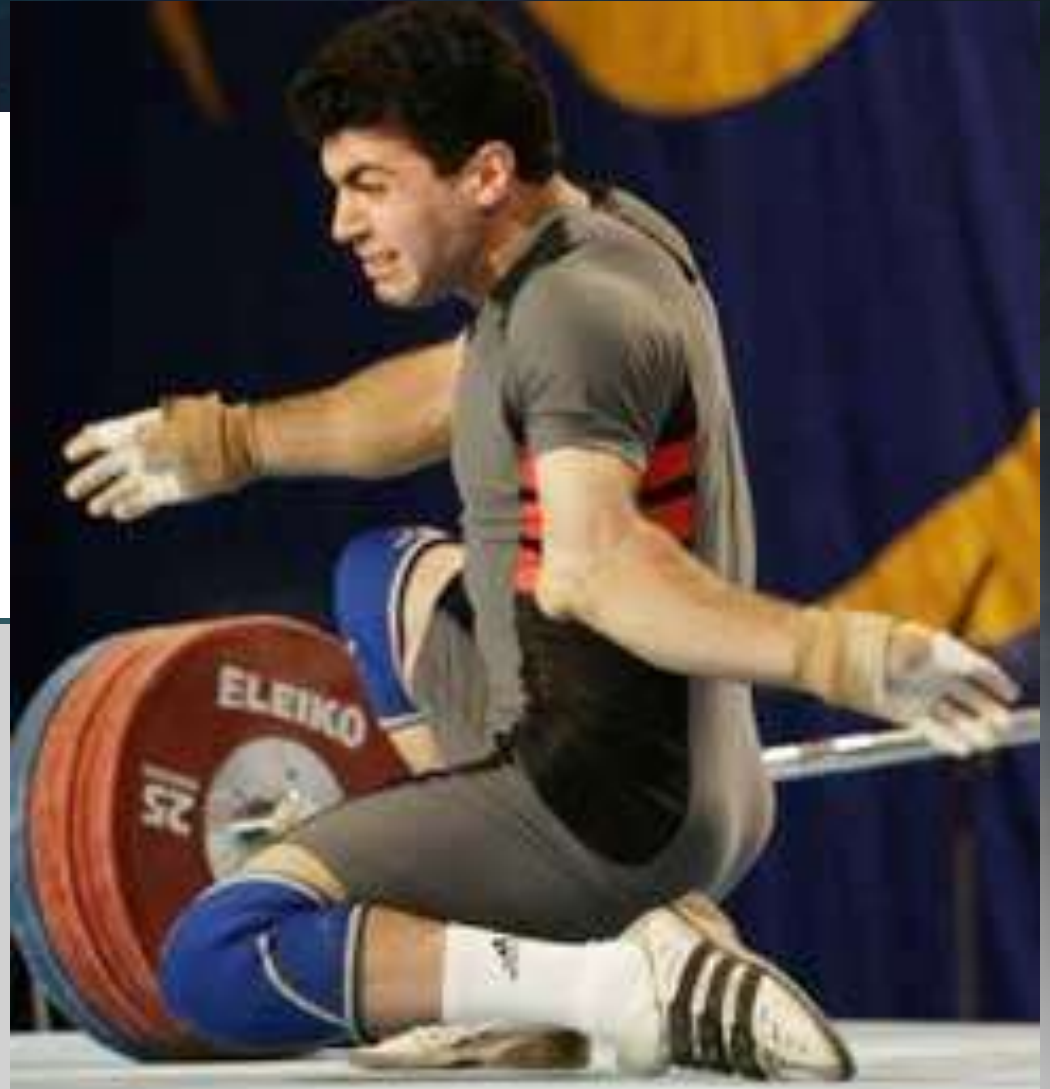
● Fractures





Sports Field Injuries

● Dislocation





Sports Field Injuries





Sports Field Injuries

● Dislocation

Posterior Elbow Dislocation



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Sports Field Injuries

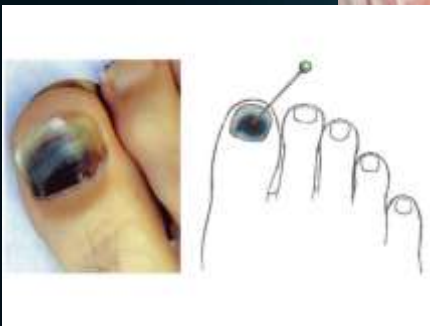
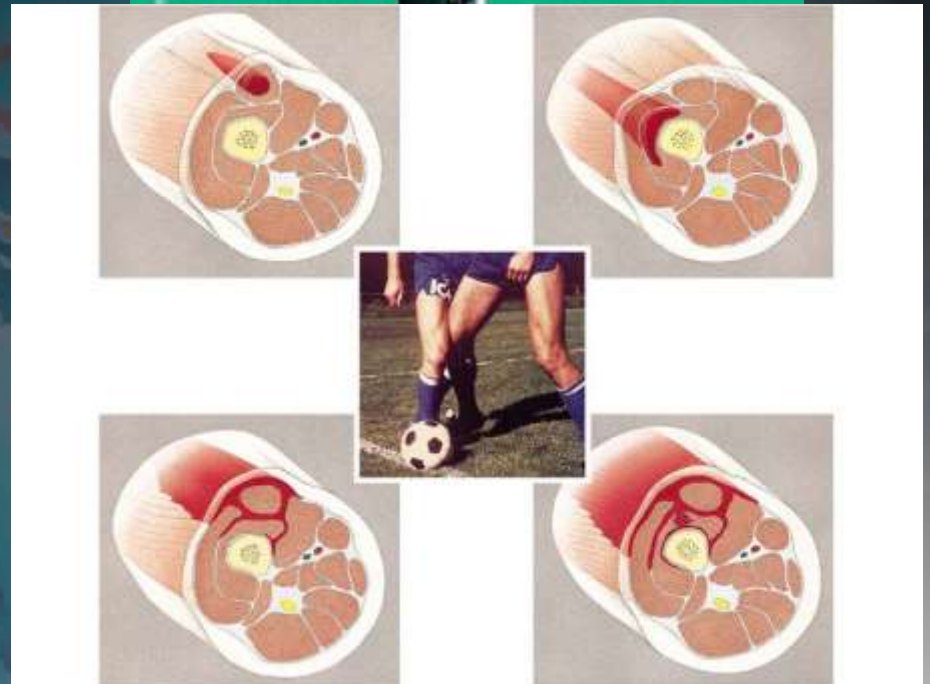
● Skin Ruptures





Sports Field Injuries

● Soft Tissue Bleeding





Sports Field Injuries

● Ligament Injuries



Ligament

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

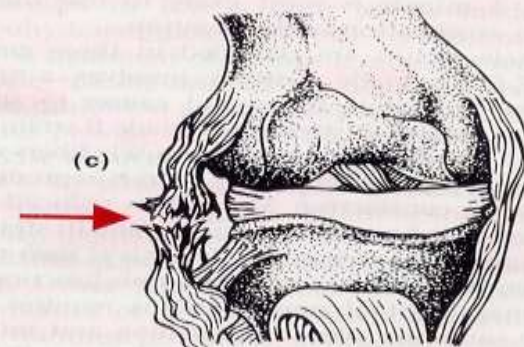
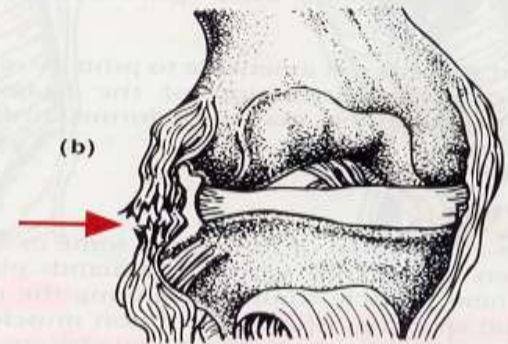
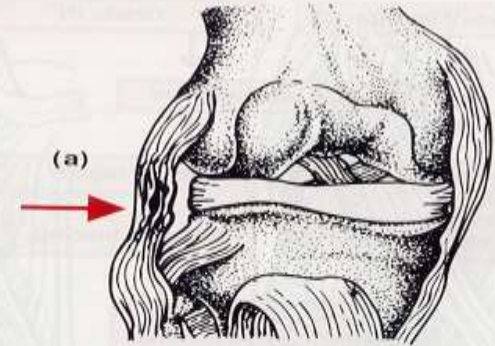
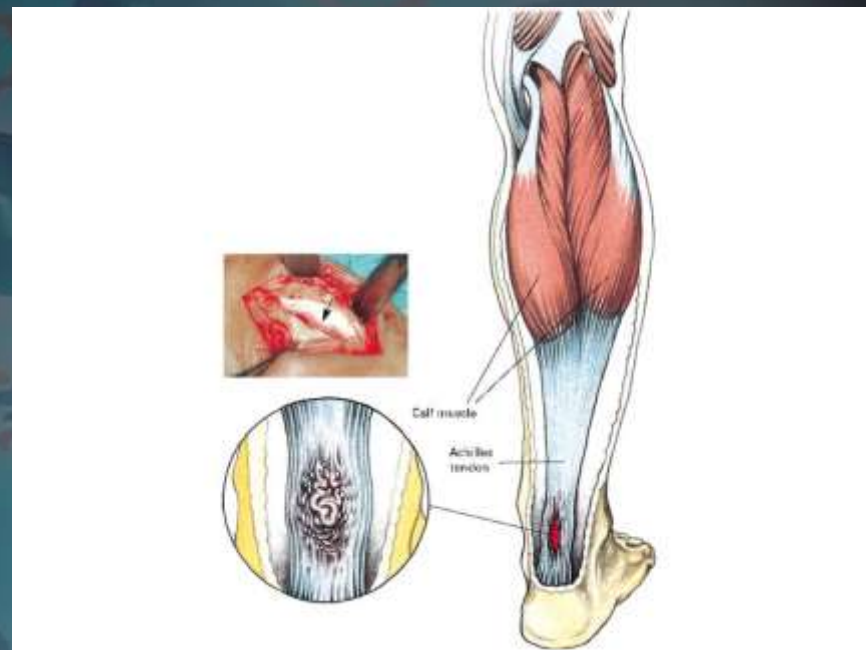


Fig. 2.4 Ligament sprains
a) Grade I
b) Grade II
c) Grade III



Sports Field Injuries

● Tendon Injuries



Tendon

A) Partial

B) Complete

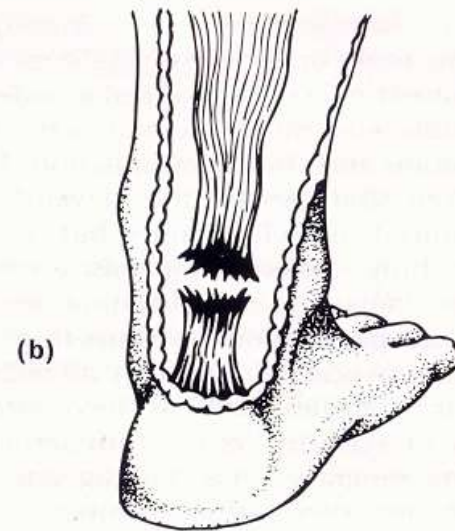
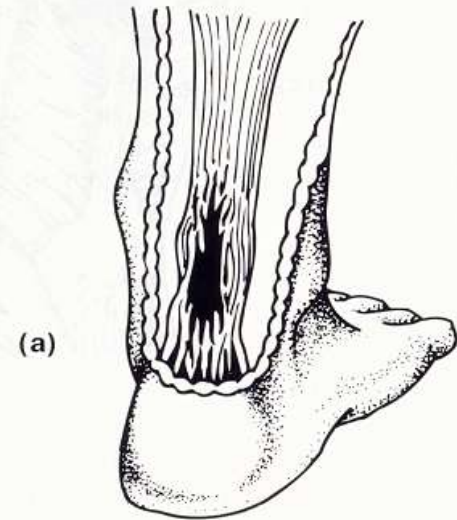
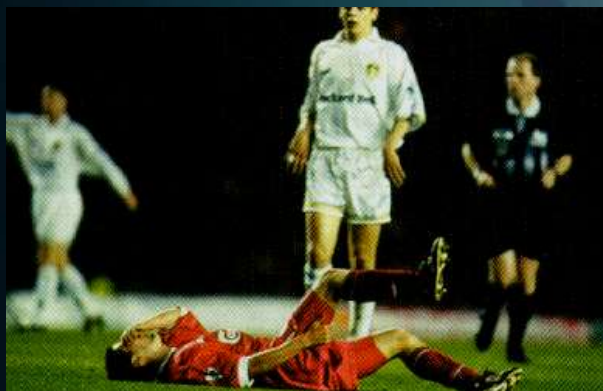


Fig. 2.7 Tendon rupture
(a) Partial
(b) Complete



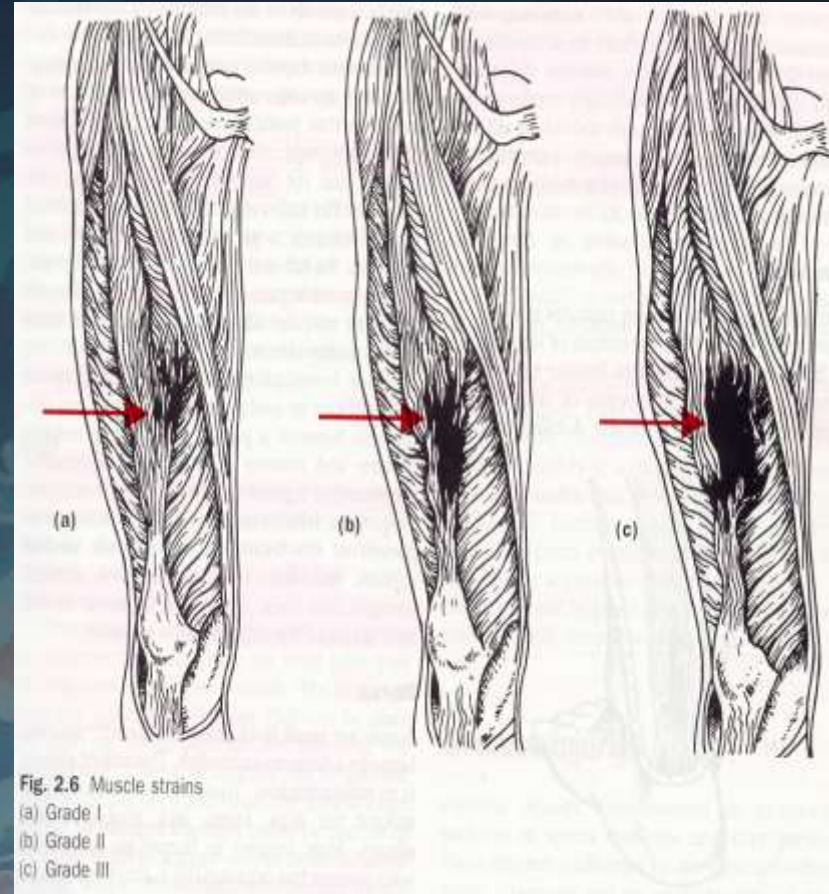
Sports Field Injuries

● Muscle Injuries



Muscle

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

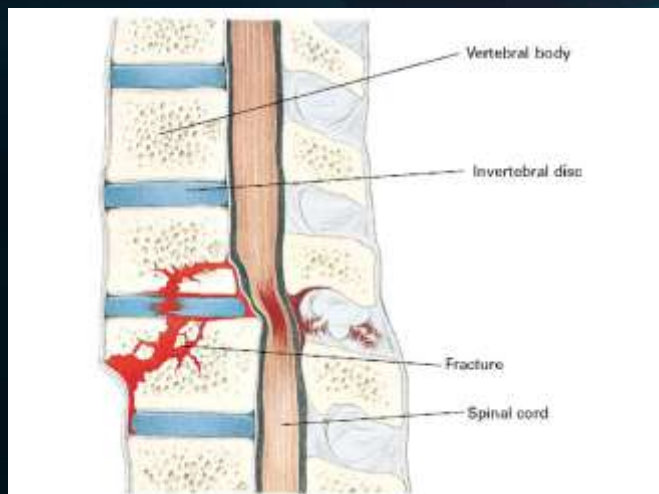






Sports Field Injuries

● Nerve injuries





Treatment sequences in Sports Injuries

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



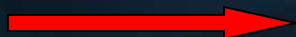
Principle of treatment:

- 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



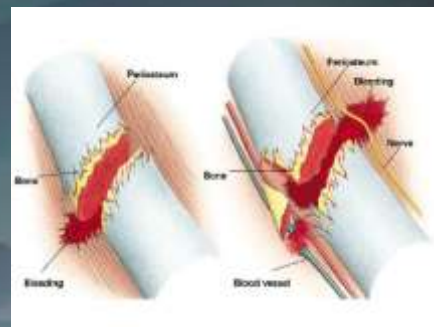
Pain

Swelling

Heat

Redness

Loss of function





Primary Cares in Sports Injuries

PRICE D

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



Primary Cares in Sports Injuries

P R I C E

Protection





Primary Cares in Sports Injuries

P R I C E

Rest

- Cease activity
- Crutches
- Slings





Primary Cares in Sports Injuries

PRICE

Reduce Pain

- Decreases pain (analgesic)
- 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

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





Primary Cares in Sports Injuries

P R I C E

- 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

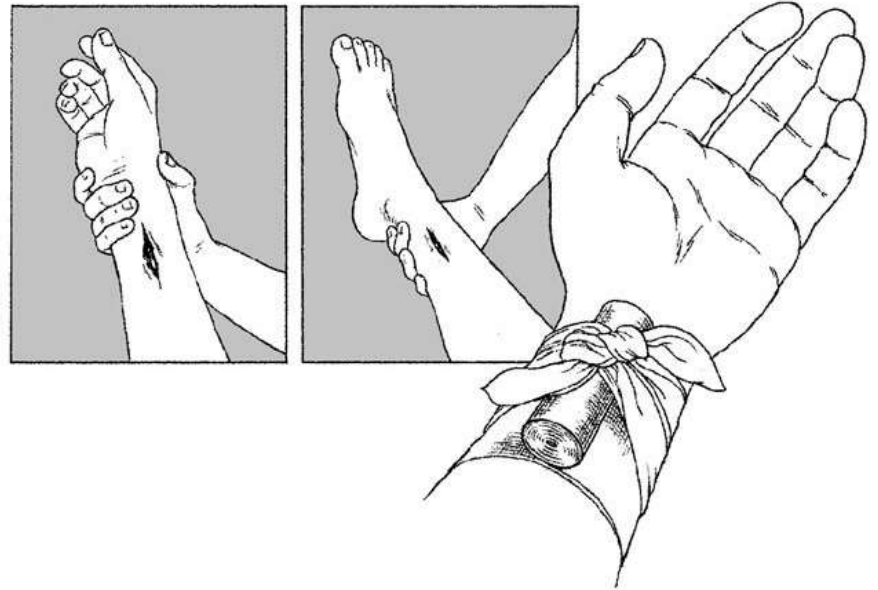




Primary Cares in Sports Injuries

P R I C E

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.

Dr. Mehran Taghavi

Mehran_taghavi@yahoo.com

