

Lower Extremity Injuries

The History

- How, When and Where ?
- Swelling?
- Ability to Ambulate?
- Did you hear or feel a Pop?
- Did you Relocate an Injured part?

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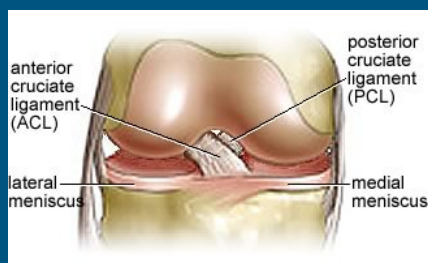
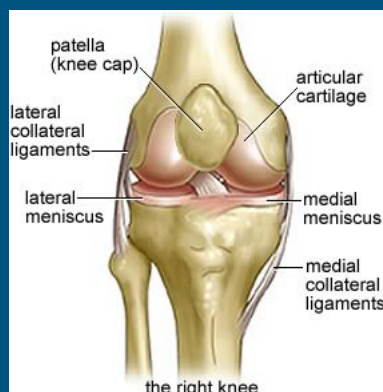
Lower Extremity Injuries

The Physical Examination

- Have the patient demonstrate the area of maximal tenderness
- Use one finger to localize tenderness
- Is the tenderness located over the bone or the soft tissues?

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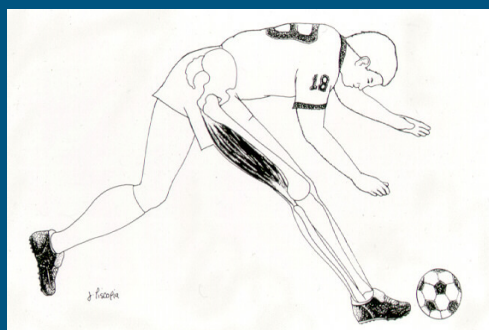
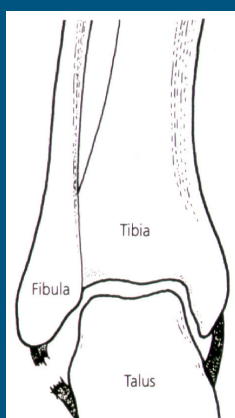
Knee Anatomy



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Injury Terms:

Sprain vs Strain



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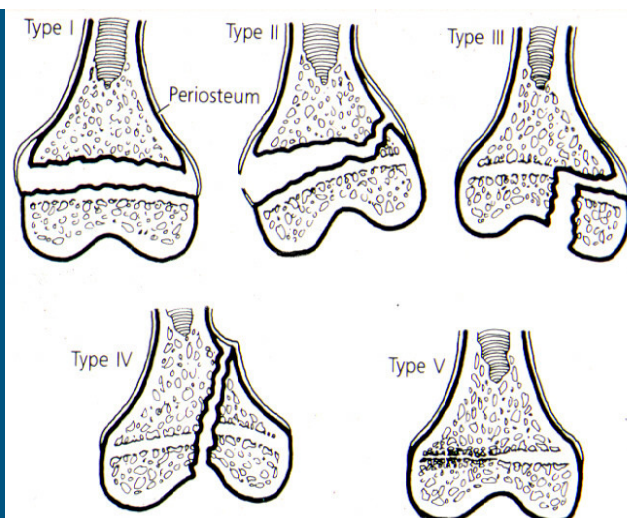
Sprains

Severity:

- Grade I - min. structural disruption
- Grade II - partial disruption
- Grade III - complete disruption

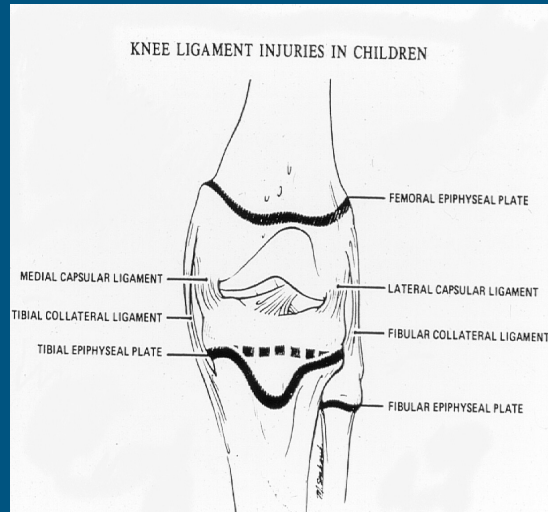
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Physeal Fracture Patterns



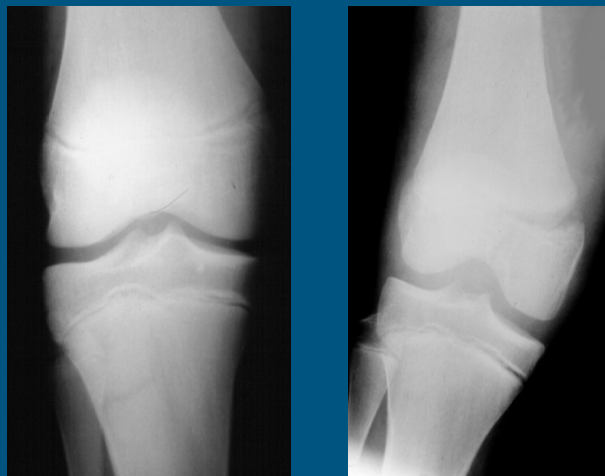
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Knee Ligaments in Children



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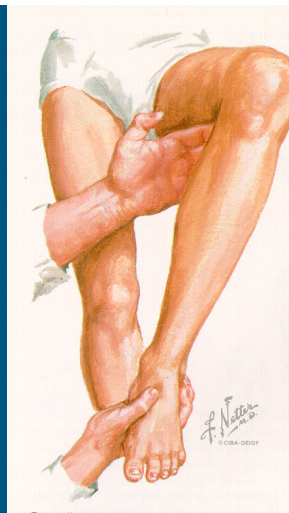
Knee Ligaments in Children



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Knee Examination

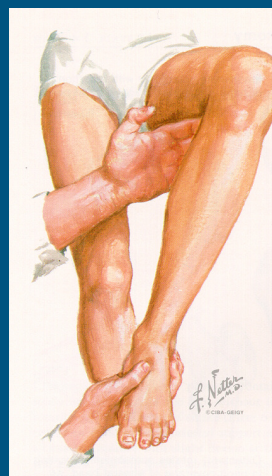
- Always examine the hip when examining the knee
- Obligatory External Rotation with Hip Flexion is an important sign of potential hip pathology
- Hip pain is often referred to the anterior thigh or knee



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Slipped Capital Femoral Epiphysis

- Obligatory External Rotation with Hip Flexion



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Physical Exam

- Deformity
- Swelling
- Tenderness
- Mobility
- Stability



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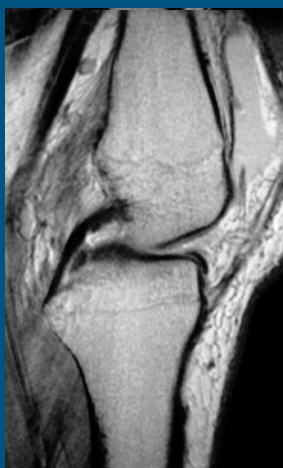
Physical Exam

- Lachman Test for ACL and PCL
- Anterior and Posterior Drawer



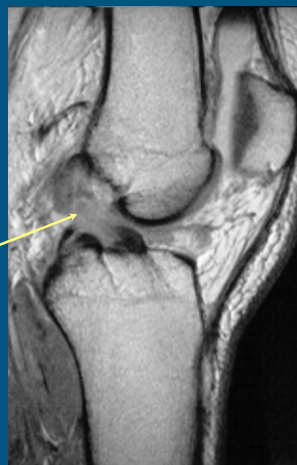
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MRI



- Menisci
- Ligaments
- Tumor

Torn ACL



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Physical Exam

- Assess Medial and Lateral Stability



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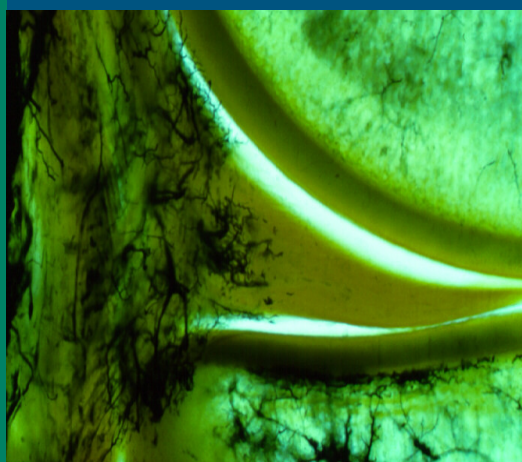
Physical Exam

- Palpate the Joint Lines for Tenderness -- Meniscal Pathology



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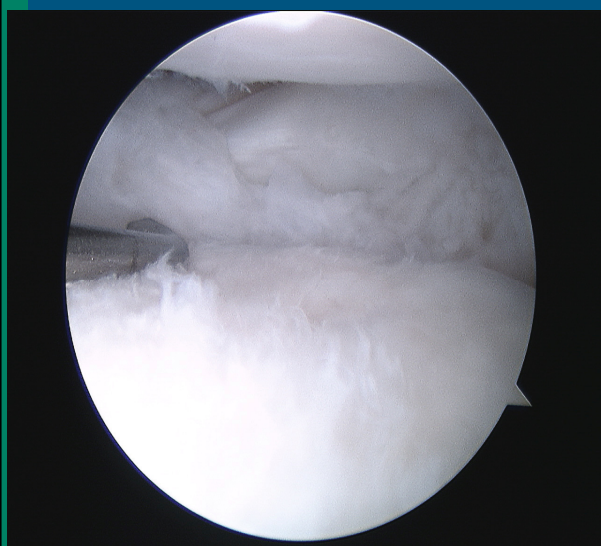
Meniscal Tears



- Rarely Before 12
- Occasionally Isolated
- Unusual to be Minor Trauma
- Consider Discoid
- Often Hemarthrosis
- May be Repairable!

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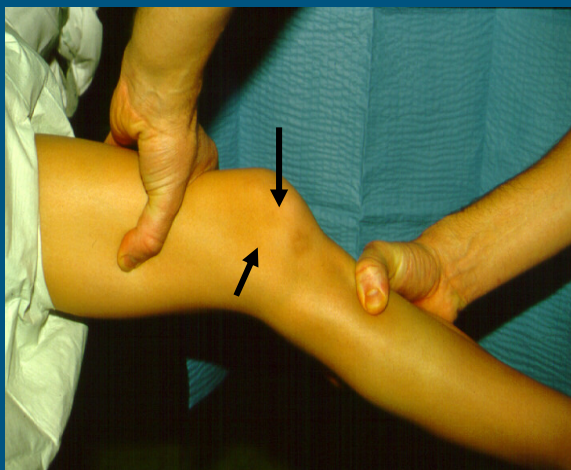
Torn Lateral Meniscus



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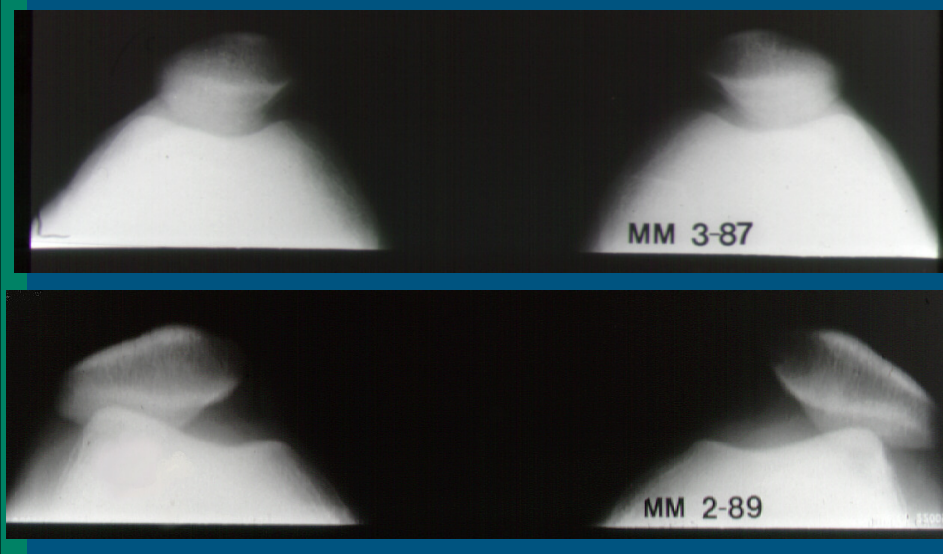
Physical Exam

- Patellar Apprehension

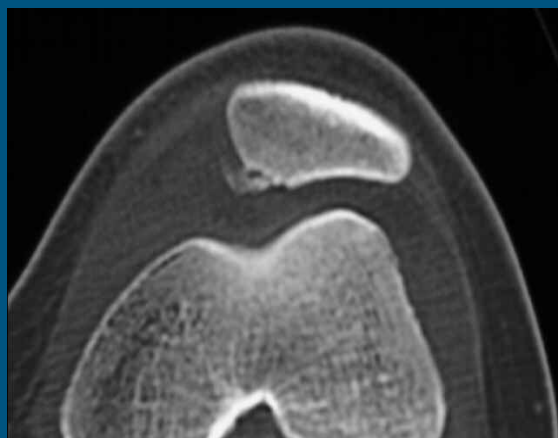


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Radiographs: Merchant view

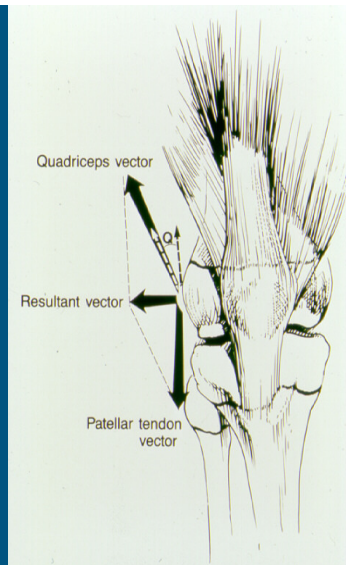


Patellar Dislocation



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Patellofemoral Articulation

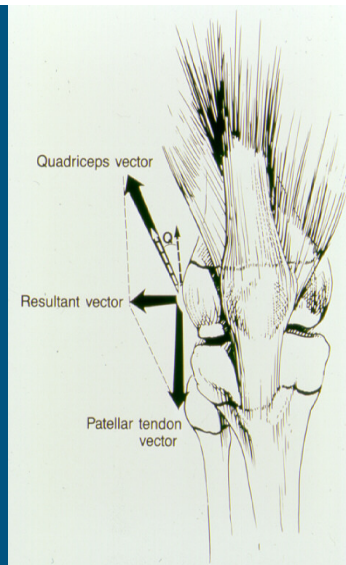


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Patellofemoral Articulation

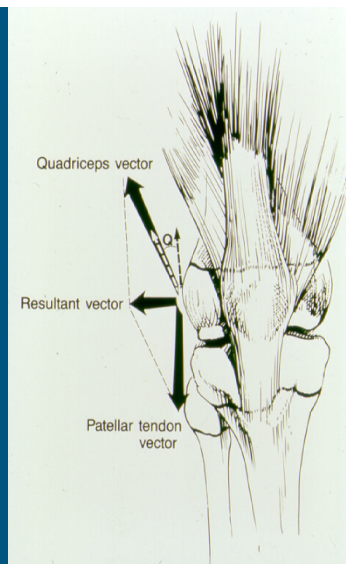
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Patellofemoral Articulation



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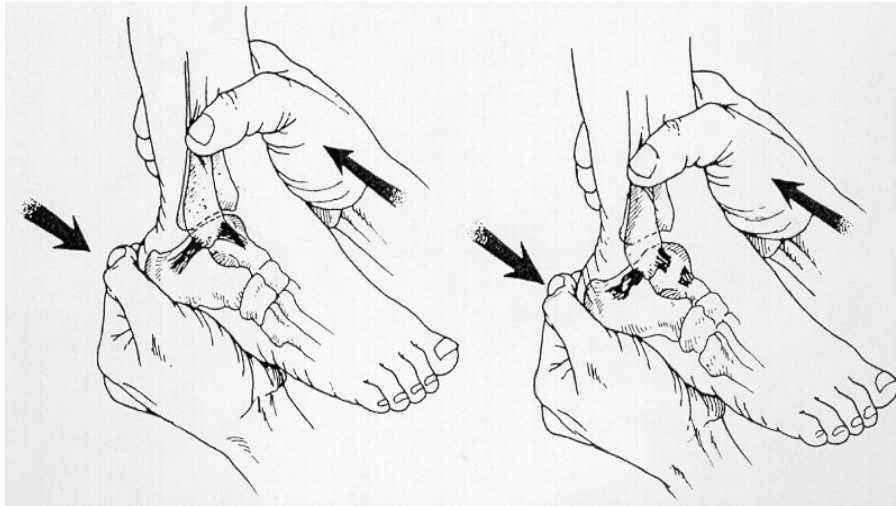
Patellofemoral Articulation



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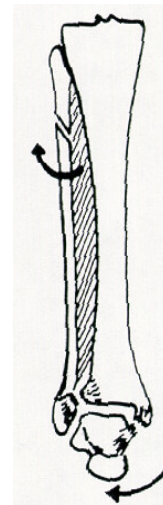
Ankle Sprains

Physical Exam: Stability



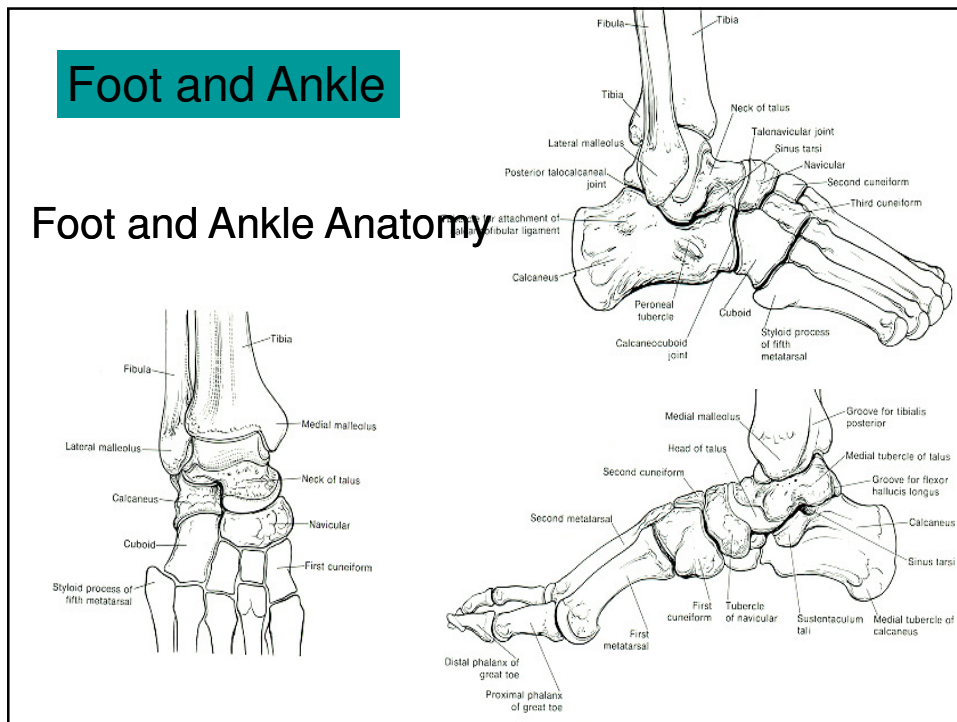
Ankle Sprains

Common Injury Patterns

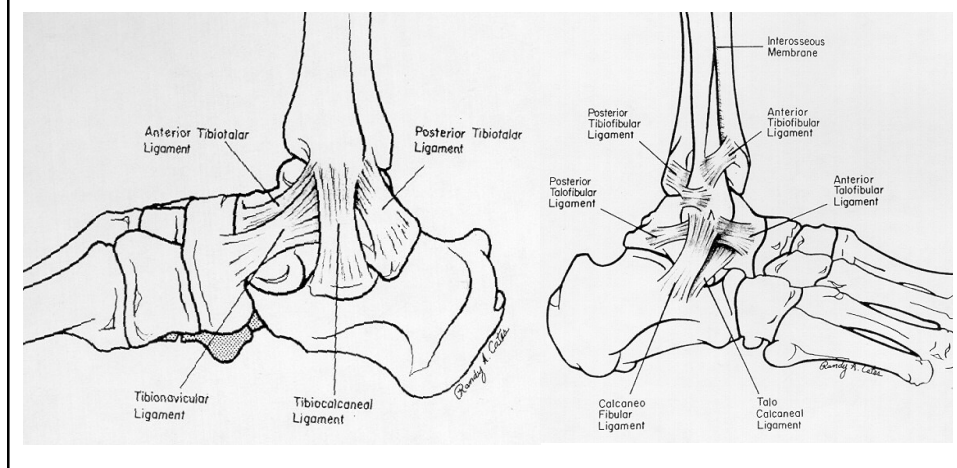


Foot and Ankle

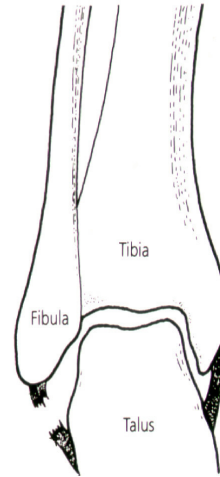
Foot and Ankle Anatomy



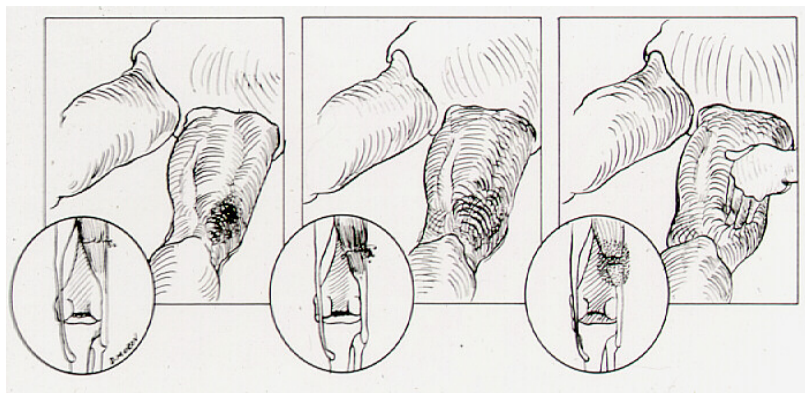
Ankle Ligament Anatomy



Ankle Sprains

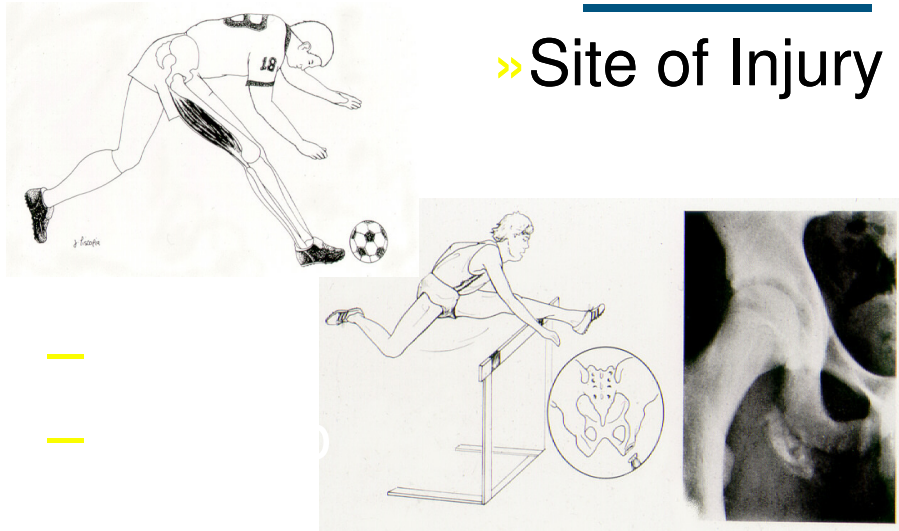


Hamstring Strains



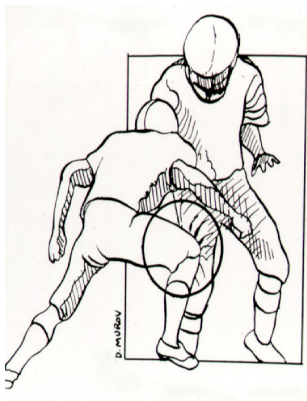
Strain vs. Avulsion Fracture

» Site of Injury

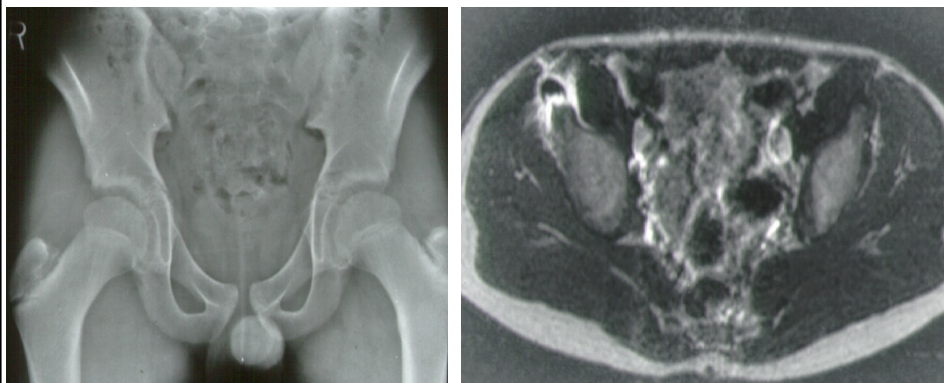


Thigh Injuries

Quadriceps Contusion



Pelvic Avulsion Fractures



Physeal Fracture of the Fibula



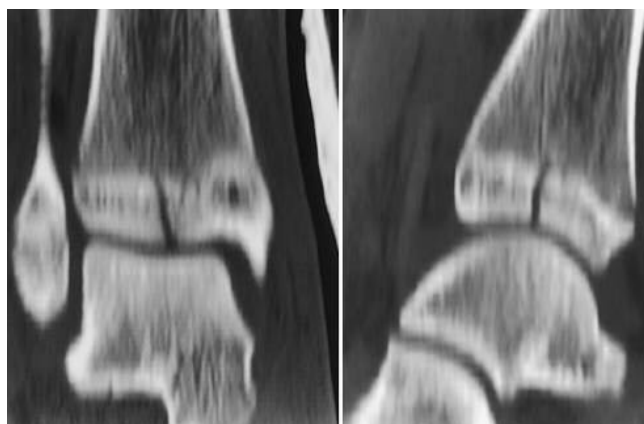
Ankle Injuries

Physeal Injury

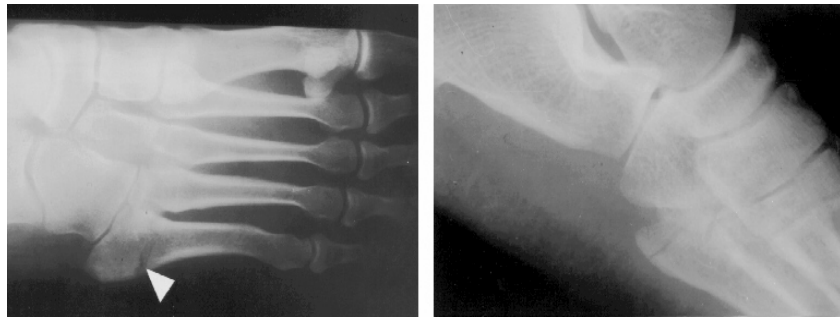
- Treatment

Immobilize, Non-weightbearing
Ice, Elevate
Referral 24-72°

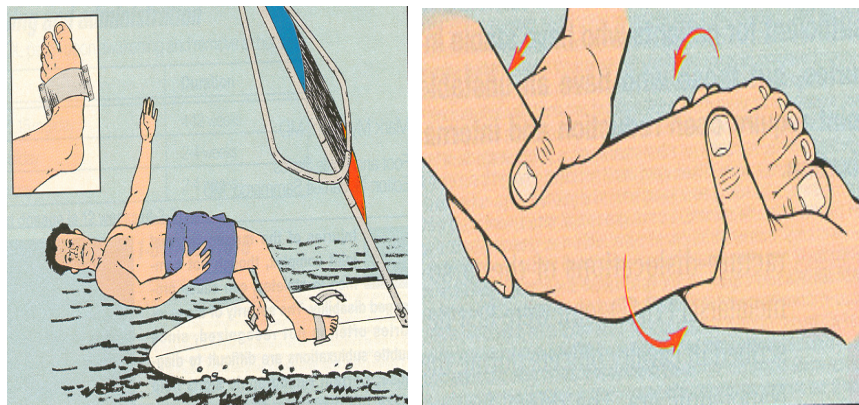
Tillaux Fracture



Fifth Metatarsal Fracture

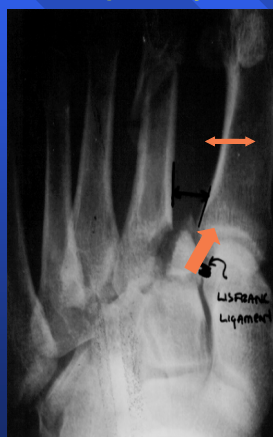


Lisfranc Injury



Forefoot Injuries

Lisfranc Injury



U Mechanisms:

- » longitudinal
- » twist
- » bend

U Treatment:

- » Identify or suspect
!
- » Splint, Ice,
Elevate,
- » Early referral to
- » Ortho for ORIF