

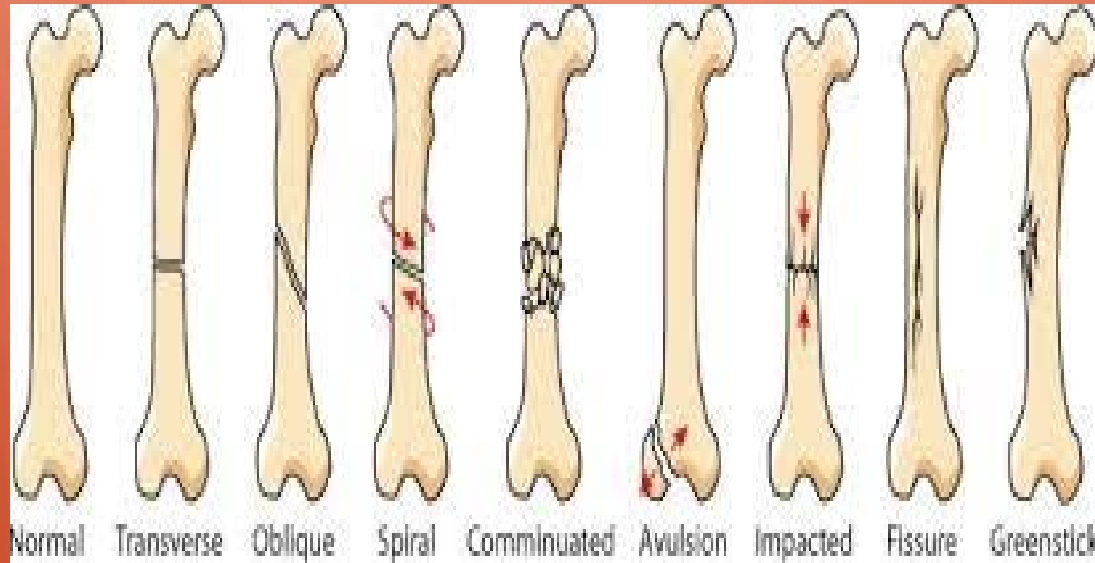
Common Ortho Injuries seen in FAST TRACK

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Today's Objectives

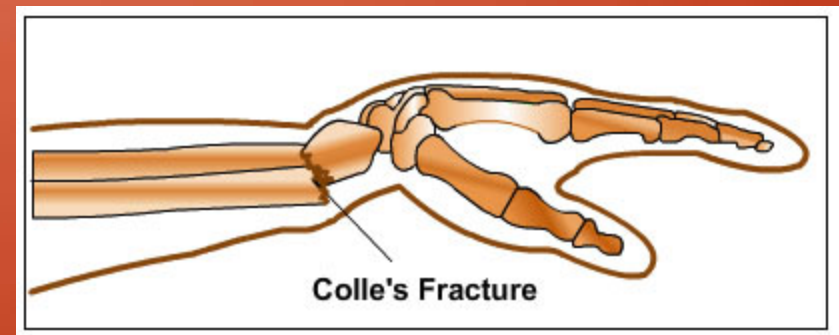
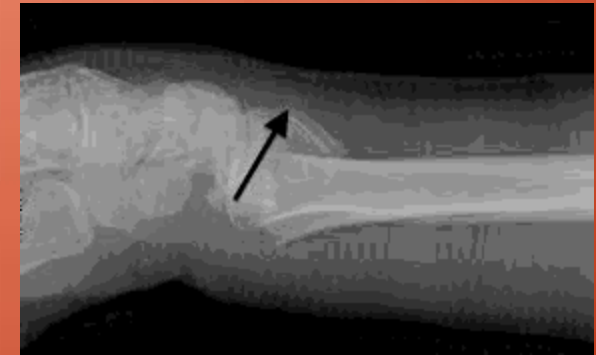
- **READING X-RAY IMAGES**
 - How to describe fracture
 - Location
 - Stable vs Unstable
 - Displace vs nondisplaced
 - Angulation
- Discuss mechanism of the injury
- Pearls related to the type of injury

Radiographic Description of Fractures



What To Tell The Orthopedist

- Open vs closed
- Intra-articular vs extra-articular
- Displaced vs non-displaced
- Describe fracture
 - Type, location, angulation
 - Dorsal vs volar angulation



Principles Of History and Physical Exam in Patients with Extremity Pain

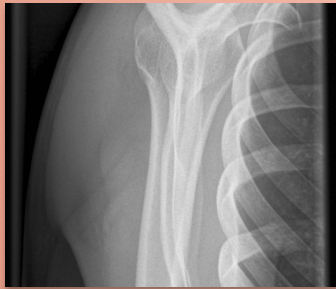
- Pain
 - Trauma vs atraumatic?
 - Mechanism of trauma
- Look for S/S of trauma present?
 - STS, tenderness, ecchymosis, ROM
- Displacement or Dislocation
 - Early reduction is goal
- Examine the joint above and below
 - Image the joint above and below
- Check pulses distal to injury
- Check NV
 - motor and sensation distal to the injury

Imaging Principle

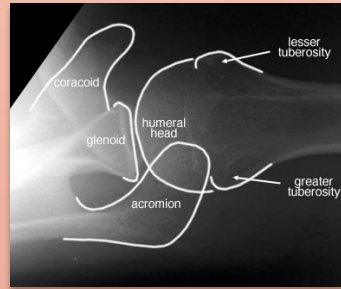
- 3 view images of extremities are most common.
 - AP
 - Lateral
 - Oblique
- Exceptions
 - Tib/fib and forearm
 - No joint involved



Special views to consider when ordering films



Y view



Axillary view



Sunrise view



Swimmers view



Scaphoid view



Open mouth view







Mechanism

Colles fracture





d 10:1

Torus Fracture

- Kids bones are soft
 - They bend instead of break.
 - They heal faster
 - Splinted for shorter amount of time.





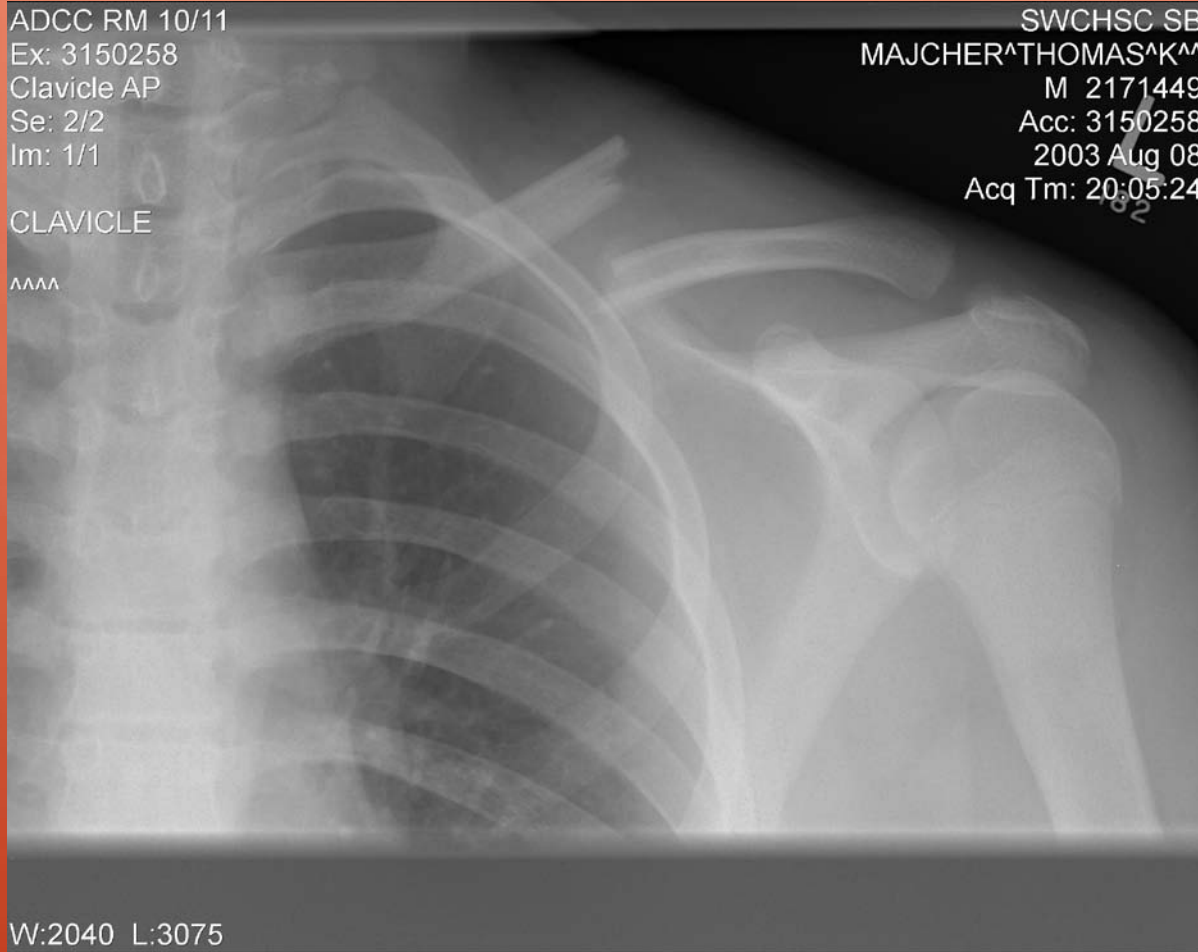
ADCC RM 10/11
Ex: 3150258
Clavicle AP
Se: 2/2
Im: 1/1

SWCHSC SB
MAJCHER^THOMAS^K^^
M 2171449
Acc: 3150258
2003 Aug 08
Acq Tm: 20:05:24

CLAVICLE

^^^

W:2040 L:3075







Boxer's fracture

Boxer's Fracture

The end of the 5th metacarpal takes the force of the impact and breaks at its neck and angulates towards the palm creating a dorsal bump.



Assessing Rotation

Normal



Rotational deformity







Mechanism

Scaphoid Fracture



Why do a scaphoid view?

- Anatomic Snuff box tenderness
- Why is it important not to miss a scaphoid fracture?
 - *Distal blood supply*
 - When fractured, the proximal portion may not get blood and dies.

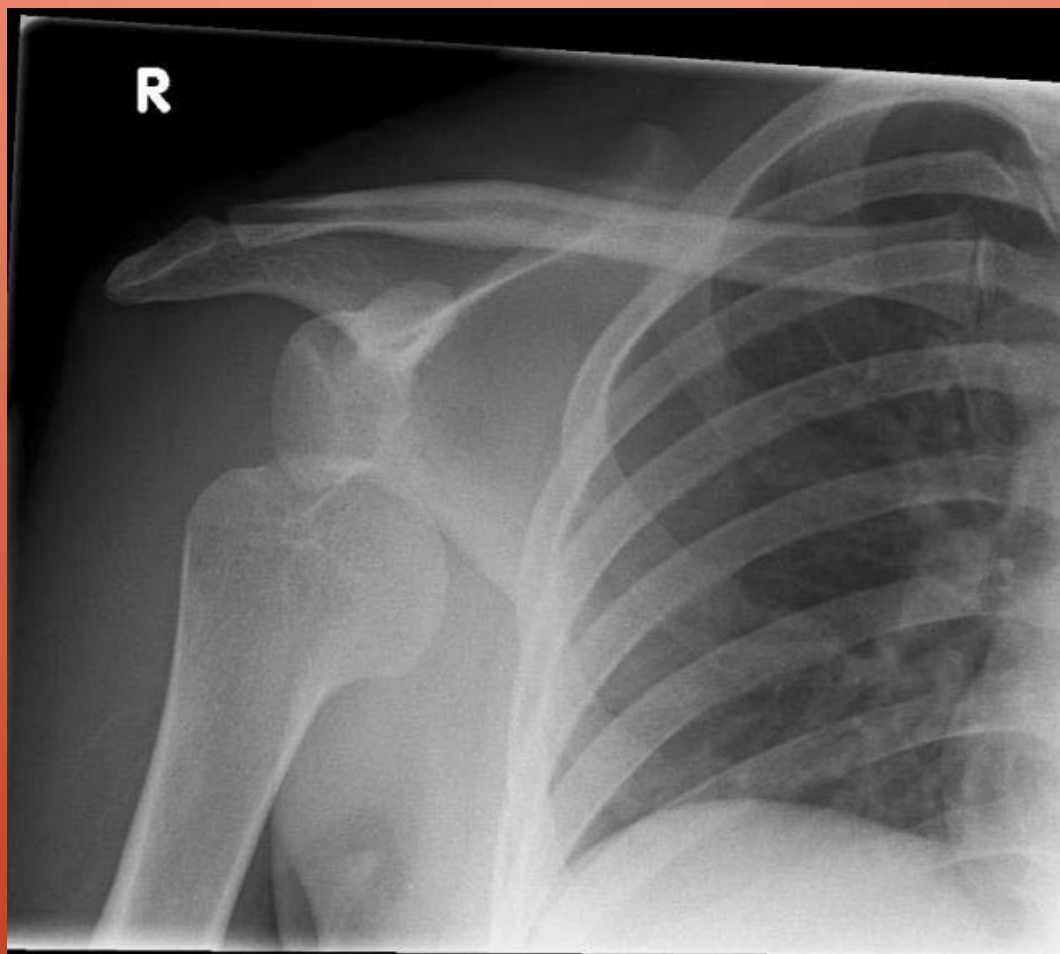


Mechanism

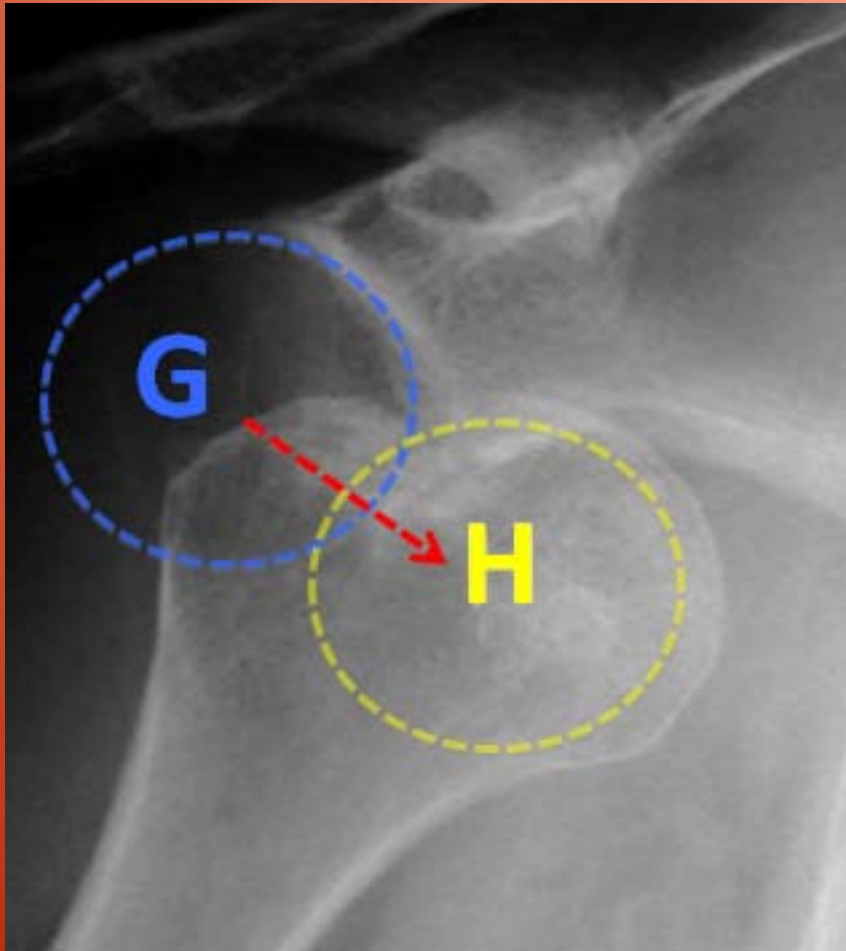
Smith's fracture







Describing Dislocation



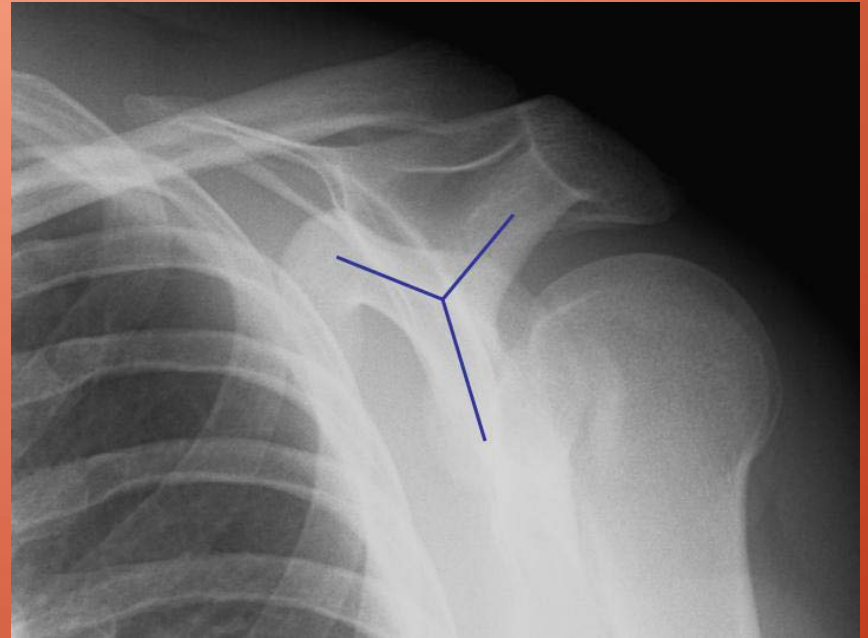
- The dislocation is described based on the position of the humeral head (H) in relation to the glenoid cavity (G):

Y view

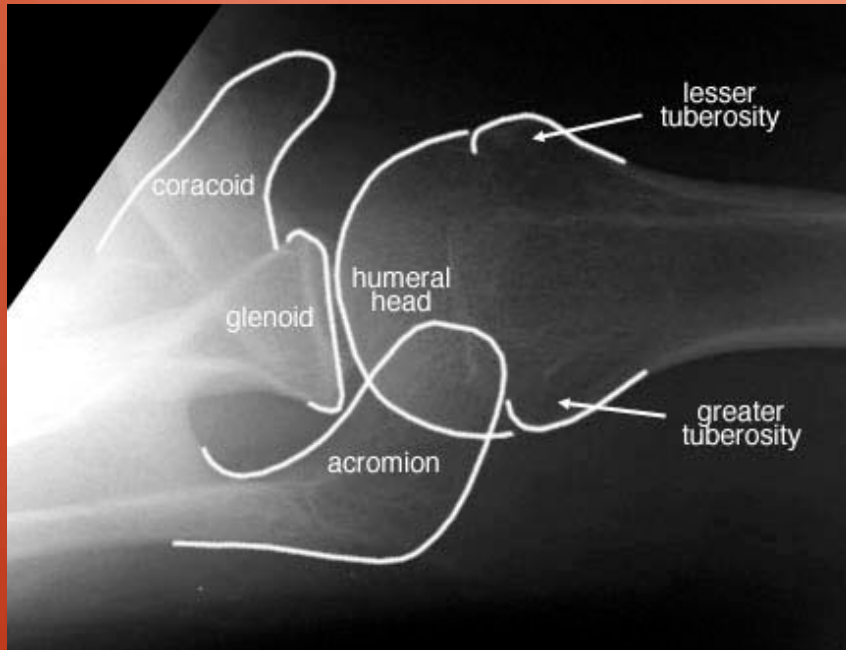


- Intersection of the spine of the scapula, coracoid process and body of the scapula
- Head of humerus should sit in the center of the spine of the scapula and the coracoid process

Y view-

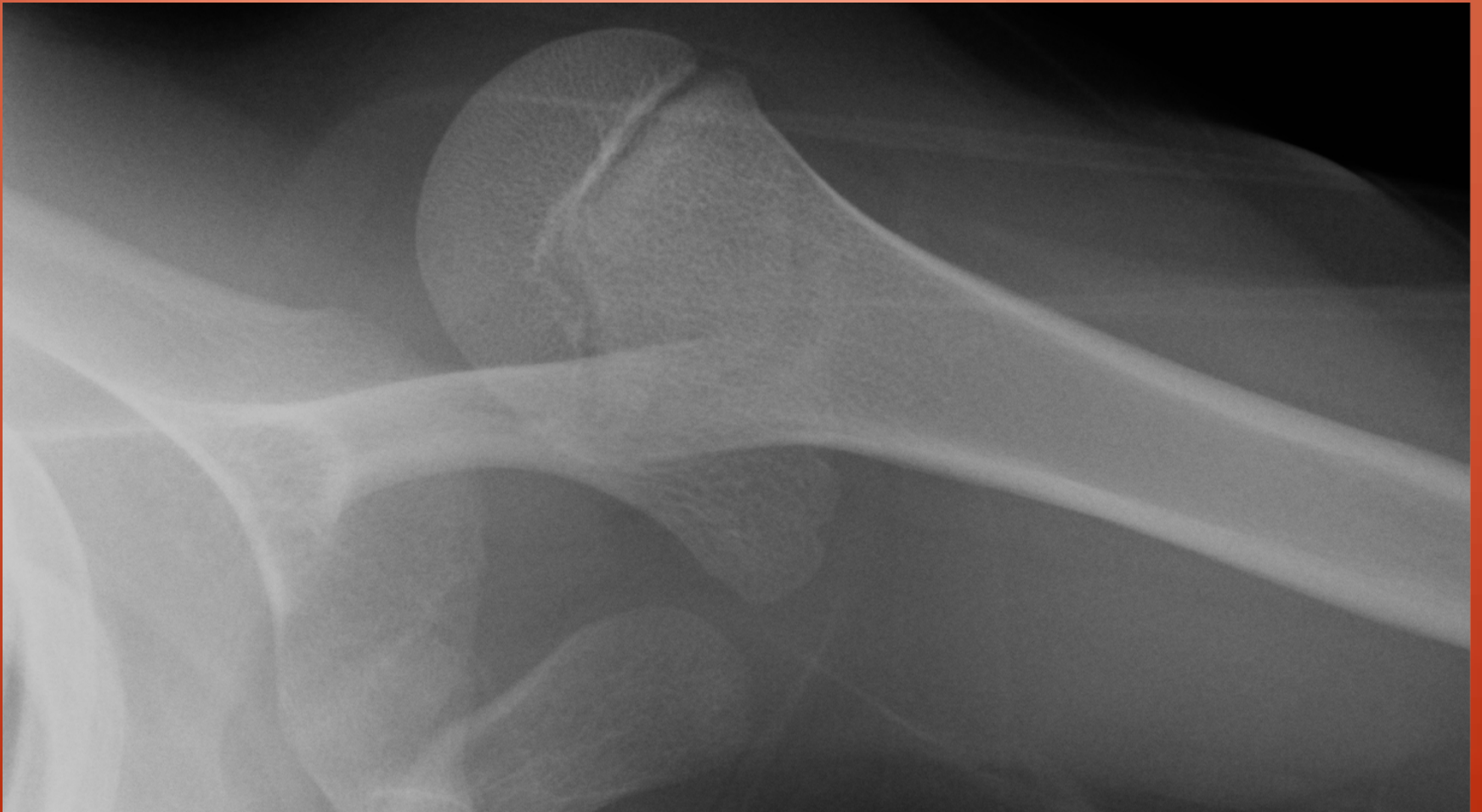


Axillary View



- Useful for anterior or posterior shoulder dislocations that are not evident in the AP view.
- The x-ray beam is directed into the axilla from below (inferior to superior), or down through the axilla from above the shoulder

Axillary View of Dislocated Shoulder







Mechanism

- Often seen in children.
- Playing on playground
- Fall from monkey bars on outstretched hands



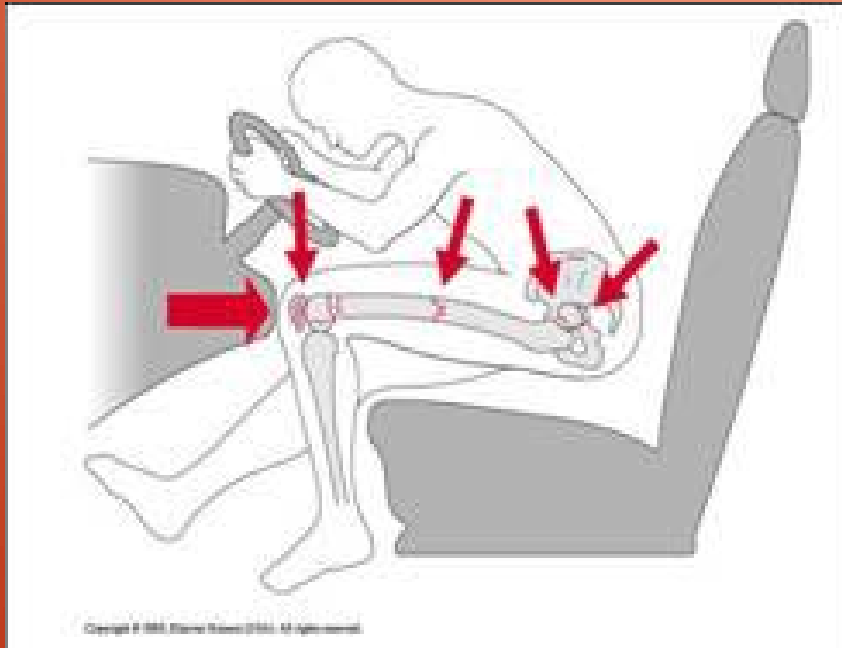
Fat pad Sign



- LATERAL VIEW****
 - Anterior fat pad
 - Posterior fat pad
 - NEVER NORMAL



Mechanism



- Inwardly angulating or outwardly angulating force combined with axial loading or weight bearing on knee.
- The classically described situation in which this occurs is from a car striking a pedestrian's fixed knee

Sometimes tibial plateau fractures are subtle



- Can be difficult to see
- IF clinical suspicion is high
 - Consider CT



Sunrise View



- Important in fall onto knee cap
- Best view to see patella fracture
- Important to check for patellar tendon disruption
 - Straight leg raise.
 - Can you feel the quadriceps contract?





Mechanism of Ankle trauma



- Significant inversion/eversion force.



Massionneuve



- The force from the medial ankle fracture causes a disruption of the **tibiofibular syndesmosis and the interosseous membrane** which leads to a spiral fracture of the proximal fibula
- If pt has ankle pain, always check for pain in the proximal fibula



Mechanism

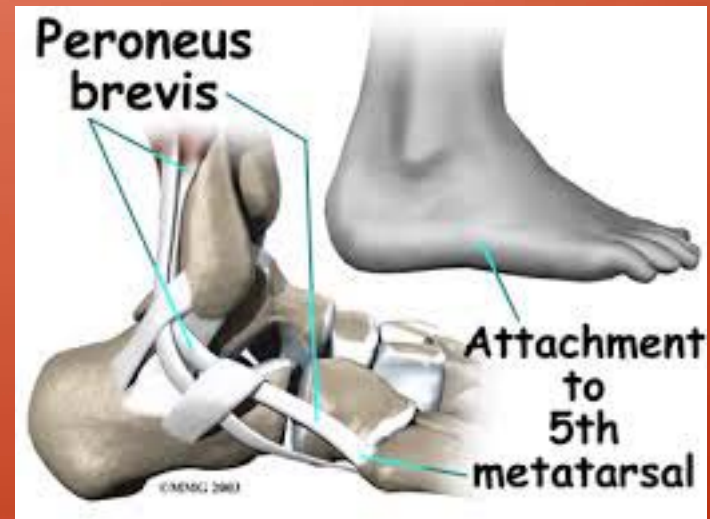


- The fracture is believed to occur as a result of significant adduction force to the forefoot with the ankle in plantar flexion

5th MT Fracture – When is it a Jones?



- Affects treatment
 - Cast versus cast shoe
 - Stable versus less stable.
 - More concern for nonunion

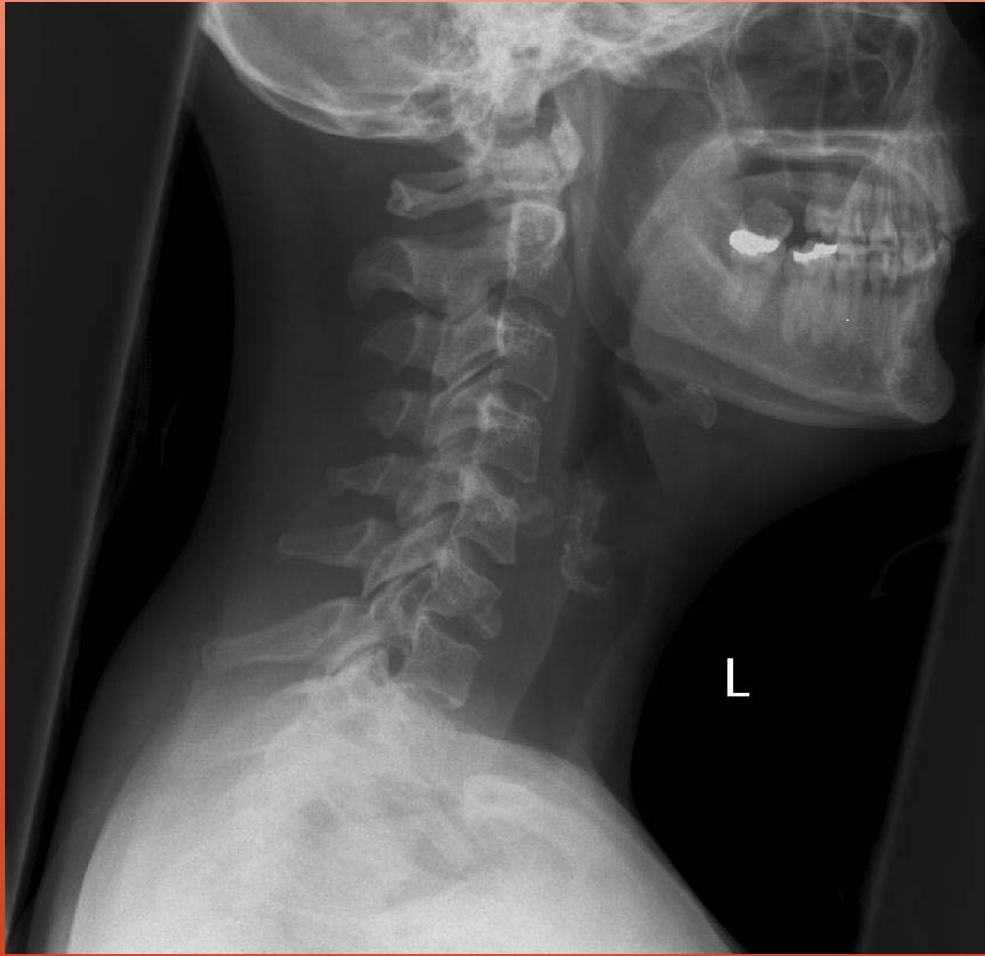




Mechanism of Calcaneal Fracture

- Fall from height
- Axial Loading





C spine series

- In Adults
 - AP, Lateral, obliques, open mouth view
- In kids
 - Less views to reduce radiation
 - Usually does not include obliques

Open Mouth View

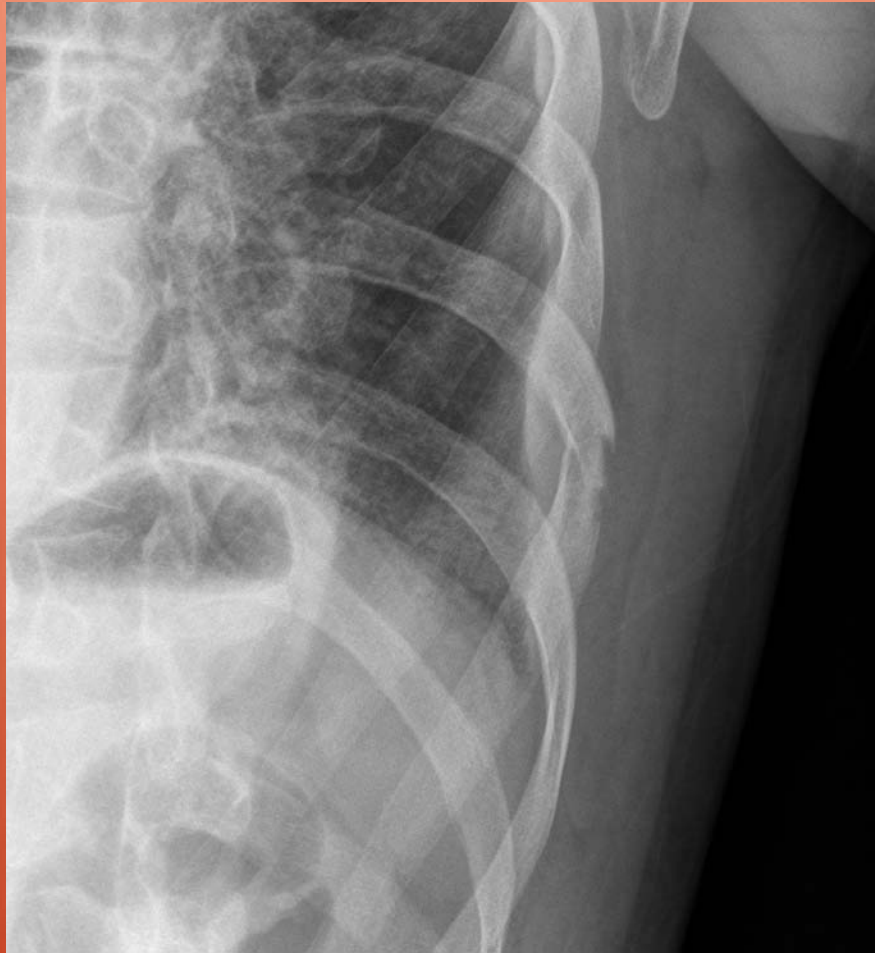




Vertebral Trauma

- Usually occurs from a significant trauma
- Concern is for spinal cord trauma or nerve damage
- Seen in elderly from less traumatic events









Views in Rib Fracture

- Rib Series which includes PA of chest
- Difficult to see fractures
 - Because of many overlapping structures
 - Multiple images necessary
- Why is it important to get a PA Chest with your rib series???????

THANK
YOU

