

Foot Problems

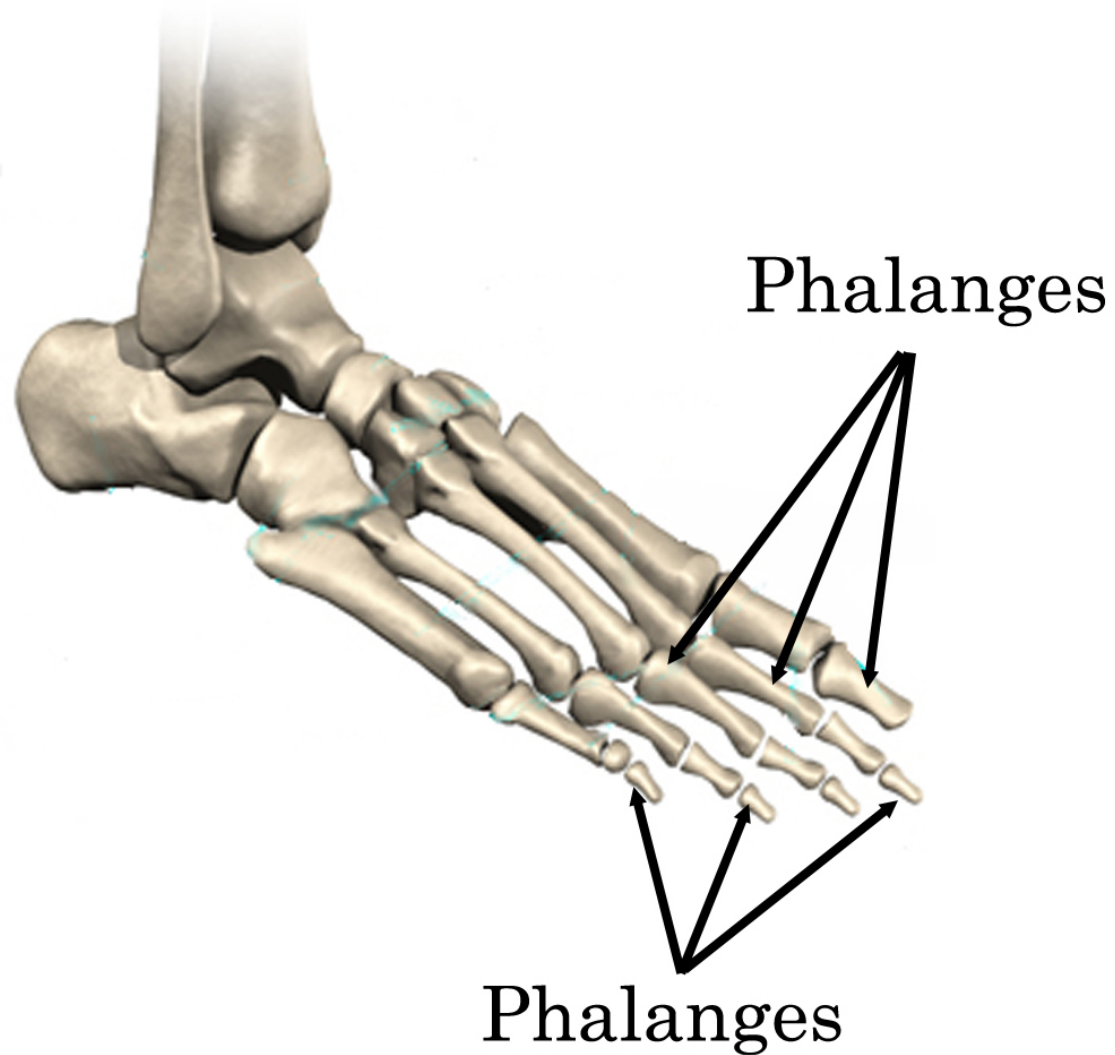


Financial Disclosures

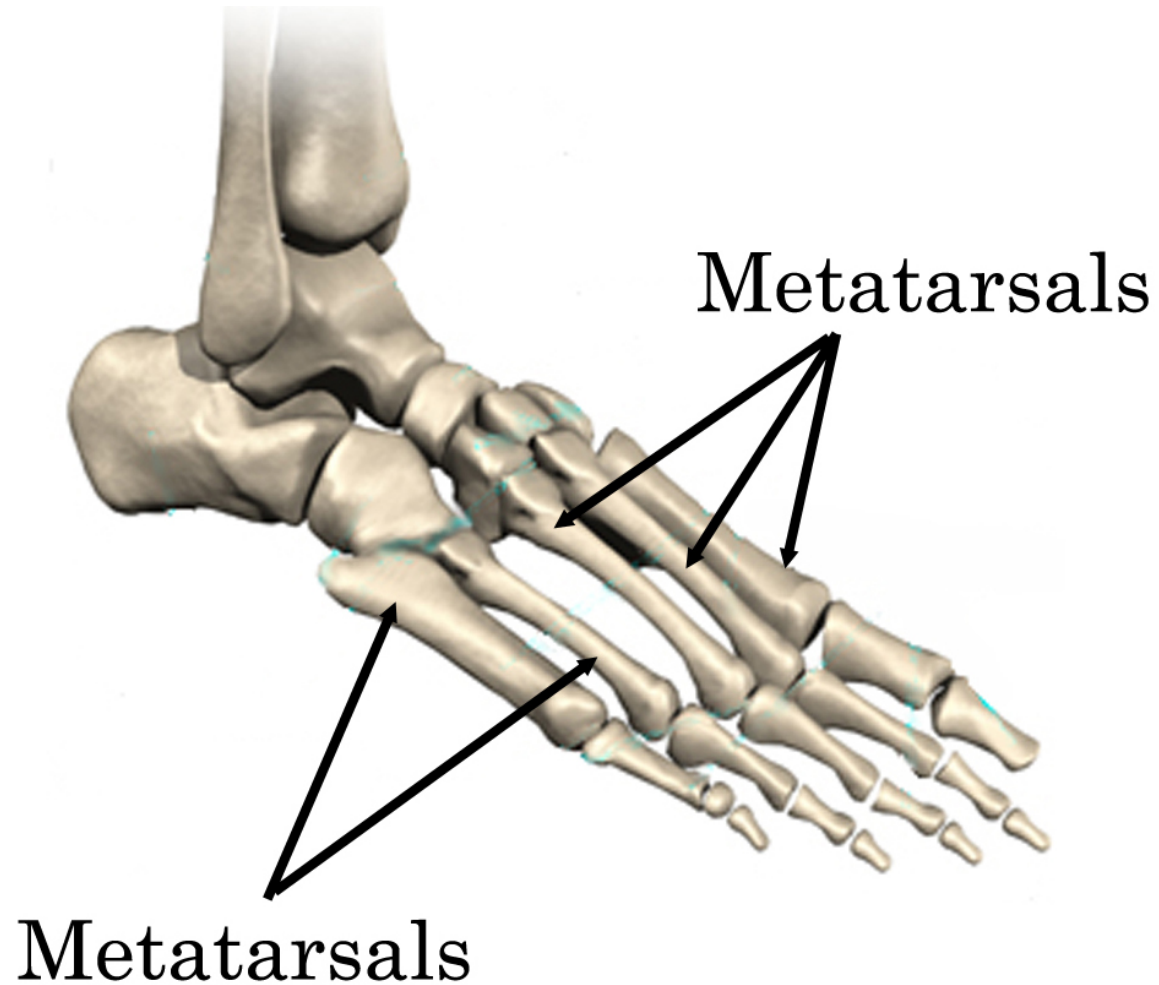
Anatomy



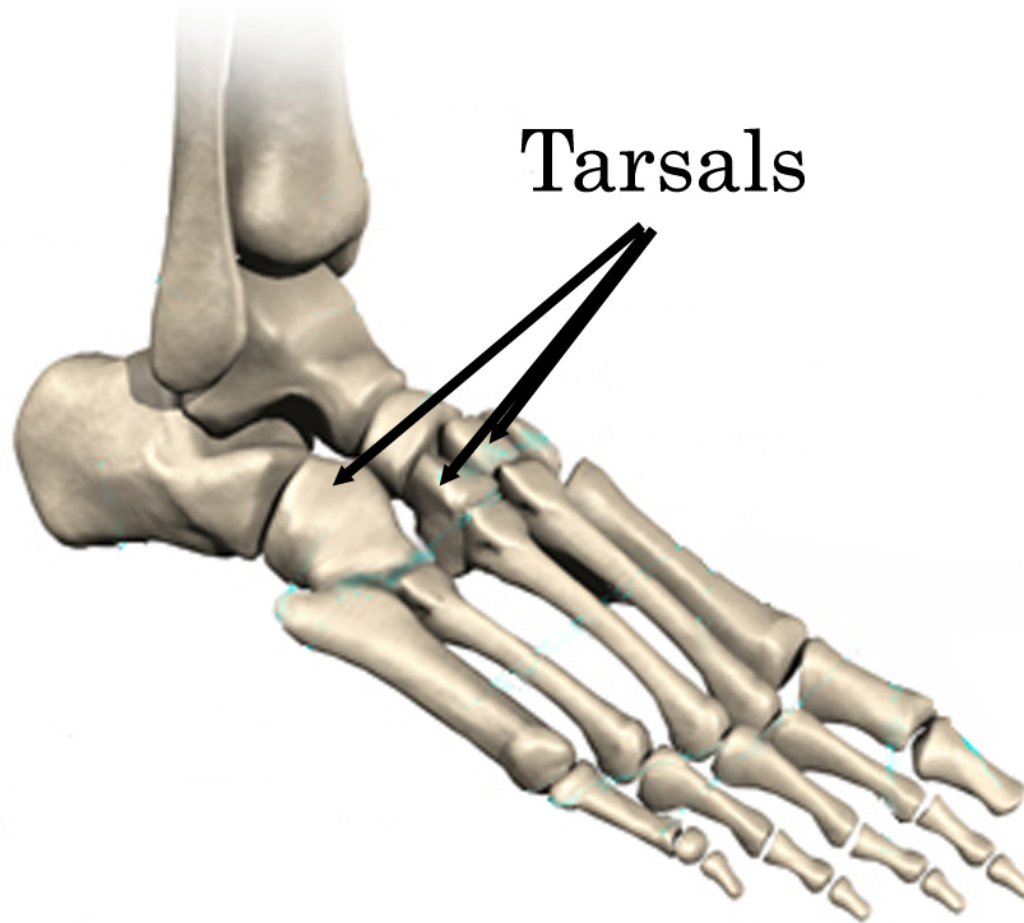
Anatomy



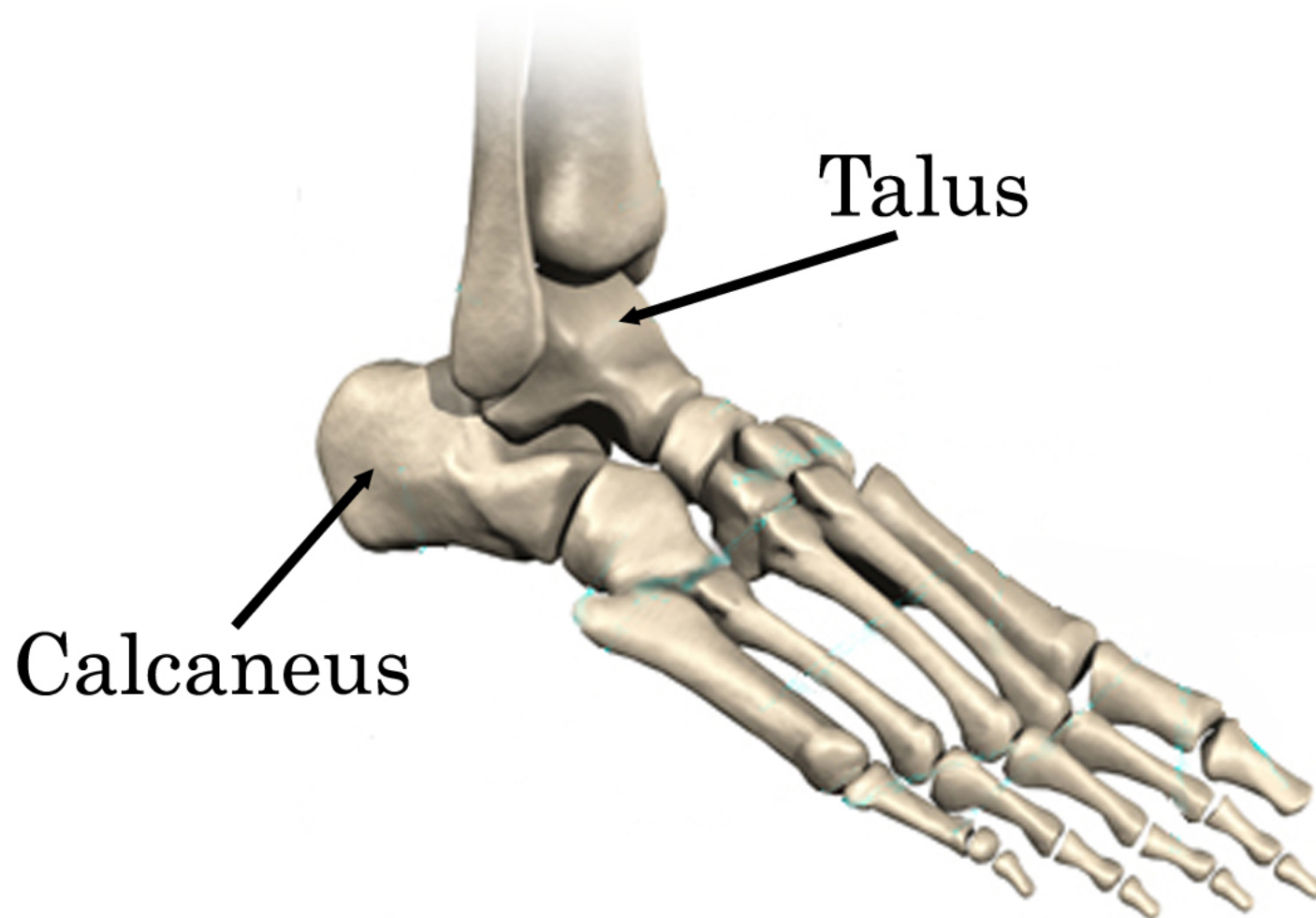
Anatomy



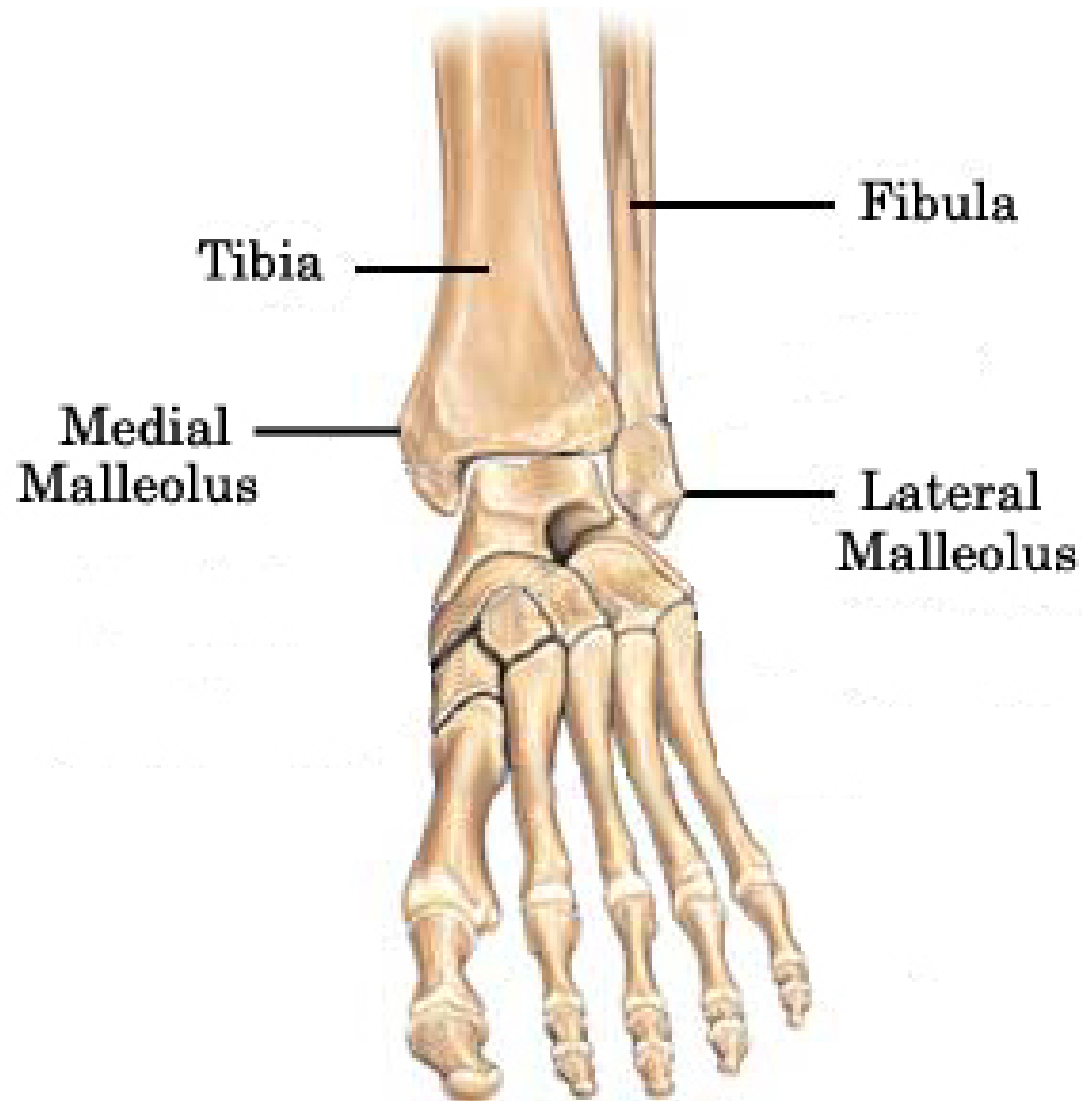
Anatomy



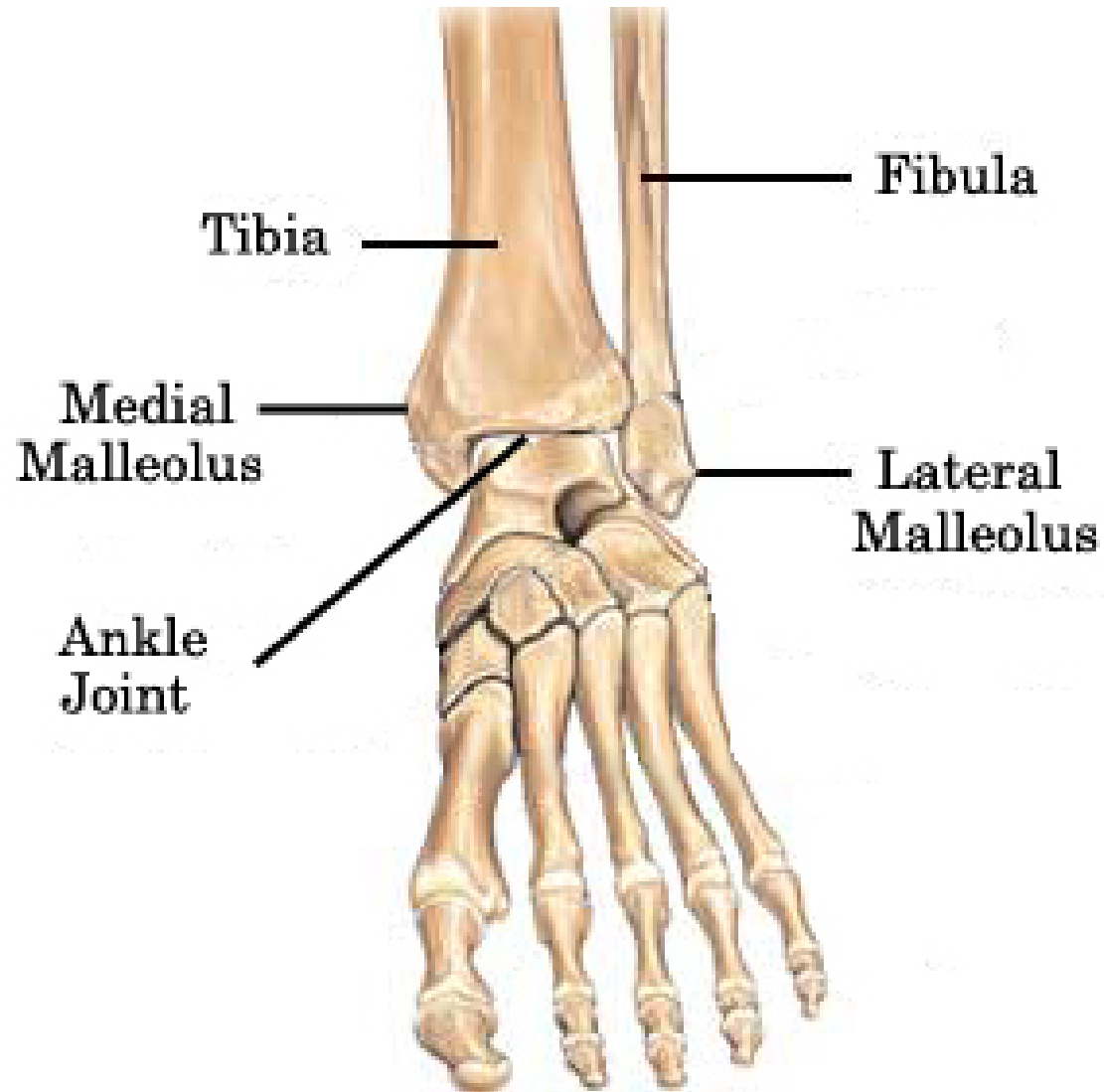
Anatomy



Anatomy



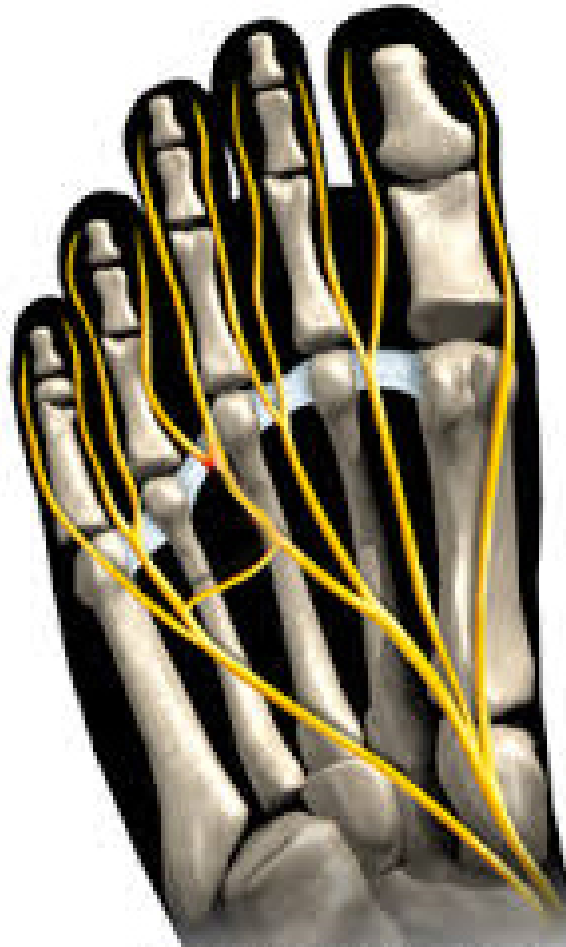
Anatomy



Common Foot and Ankle problems

- Morton's Neuroma
- Plantar Fasciitis
- Bunions and Hammertoes
- Ankle Sprains and Fractures

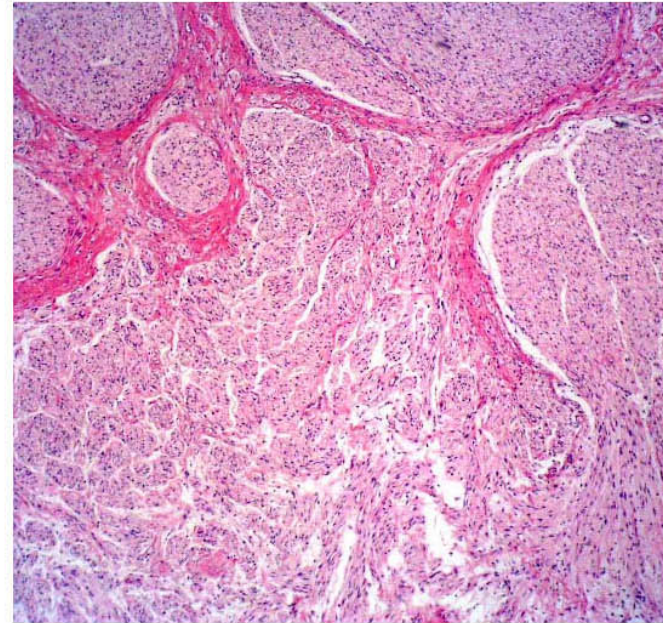
Morton's Neuroma



Neuroma



Normal Nerve



Morton's Neuroma: Symptoms

- **Pain:**
 - may radiate to toes
 - “feels like a pebble”
 - worse with high heeled shoes
- **Numbness**
- **Most Common = 3rd webspace**

Morton's Neuroma: Exam

- Splayed toes, fullness
- Palpable plantar mass
- Metatarsal shift test
- Loss of sensation

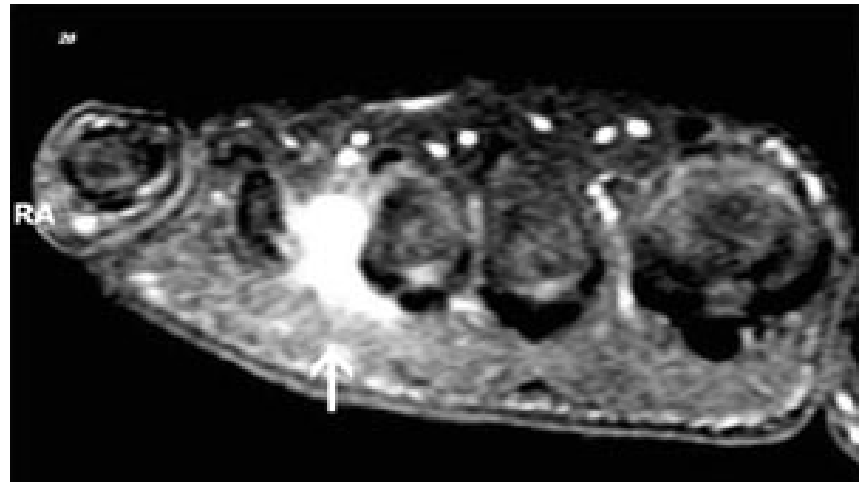


Morton's Neuroma



Morton's Neuroma: other tests

- X-rays
- EMGs, NCS
- MRI



Treatment: Conservative

Shoe modification

- Wide
- Soft
- Low heel

Metatarsal supports

Cortisone injections



Treatment: Conservative

Shoe modification

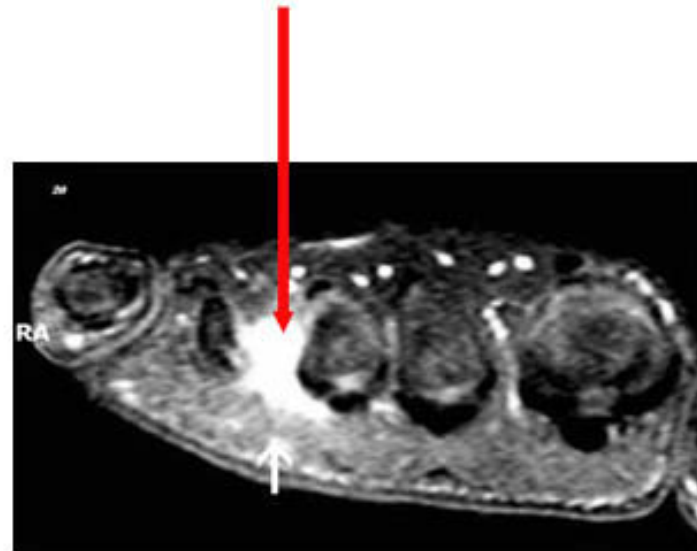
- Wide
- Soft
- Low heel

Metatarsal supports

Cortisone injections

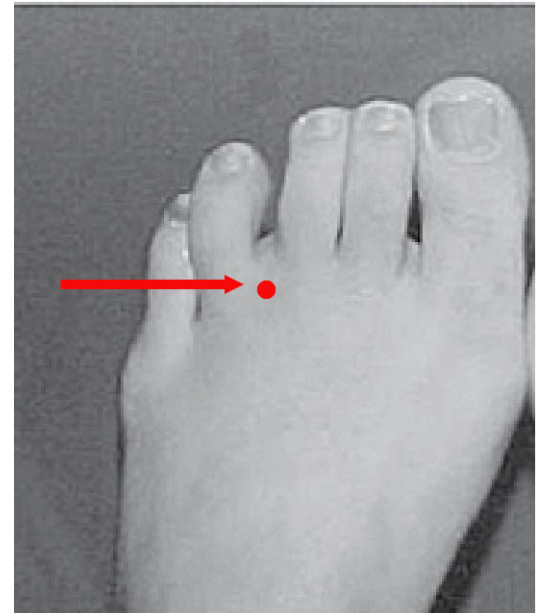


Cortisone Injection

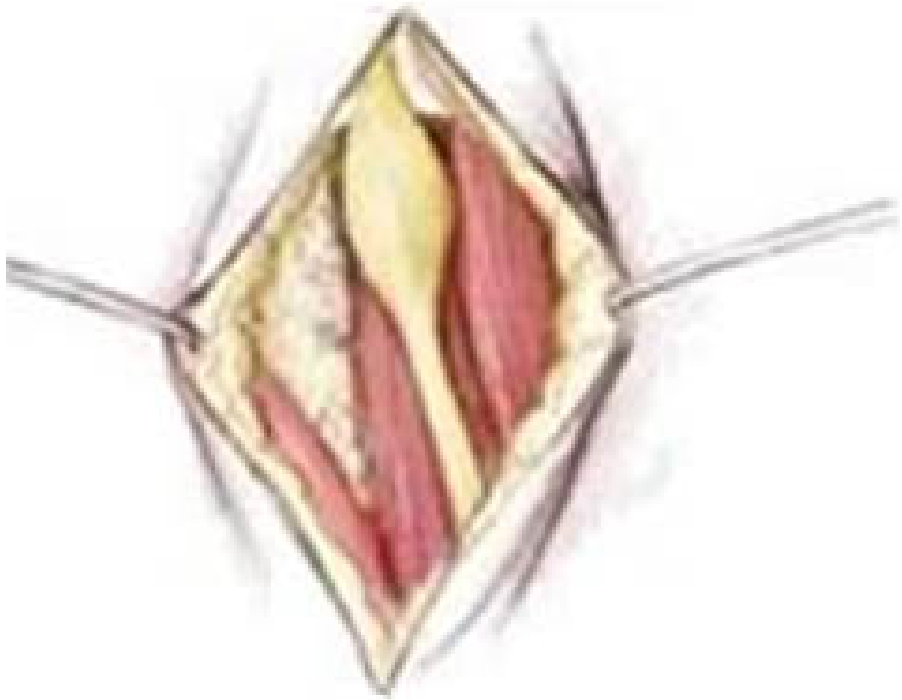


Cortisone Injection

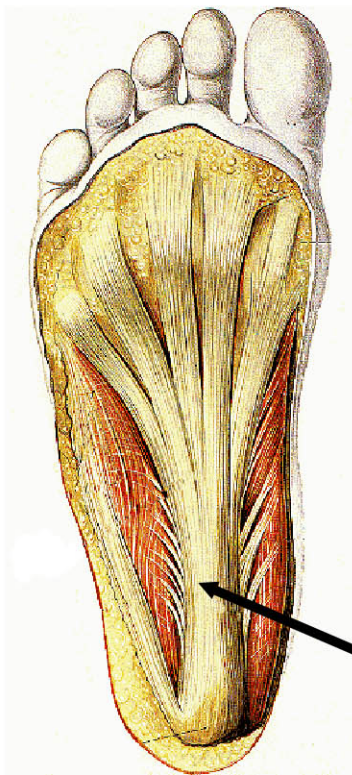
- Inject from dorsal side
- 1 cm proximal to web crease
- Between the metatarsal heads
- Go about 1cm deep
- 1cc steroid, 1cc lidocaine



Treatment: Surgery

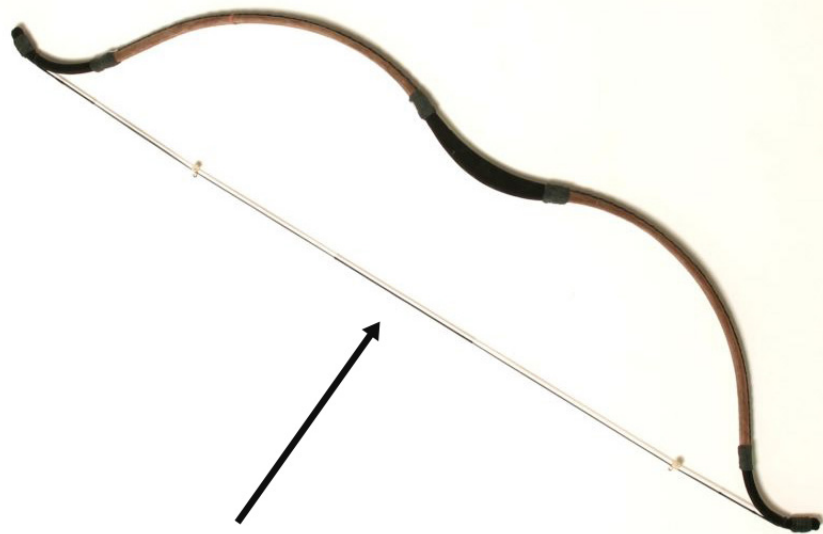


Plantar Fasciitis



Plantar Fascia

Plantar Fasciitis



Plantar Fascia

History

- Most common ages 40 – 70
- More common in men than women
- Running/Impact sports

Symptoms

- Plantar heel pain
- Often worse in AM

Physical Exam

- Tender to palpation **plantar** heel
- r/o calcaneal stress fracture with “squeeze test”

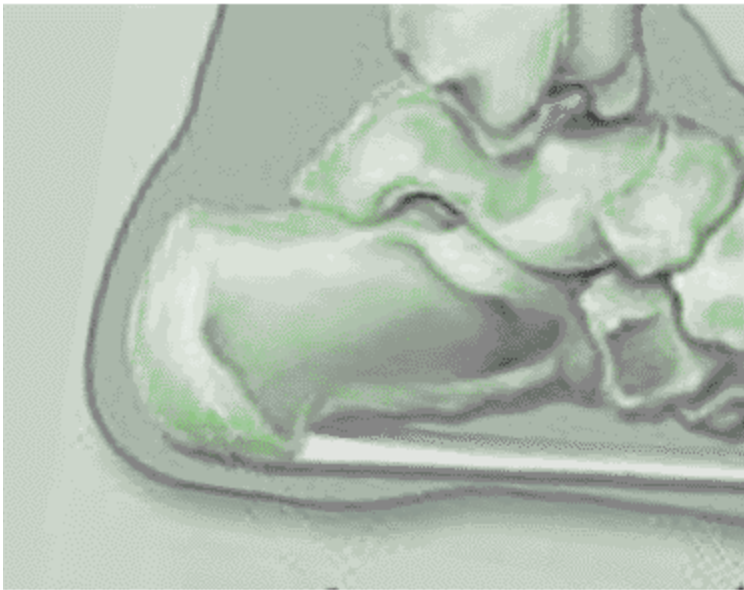


X-rays: *The Bone Spur*



Plantar heel spur

Bone Spur



Treatment

NSAIDs



Treatment

Calf stretches



Treatment

Heel pads



Treatment

Plantar massage



Treatment

Night splints



Treatment: Conservative

Short leg walking cast



Treatment (controversial)

Cowboy boots

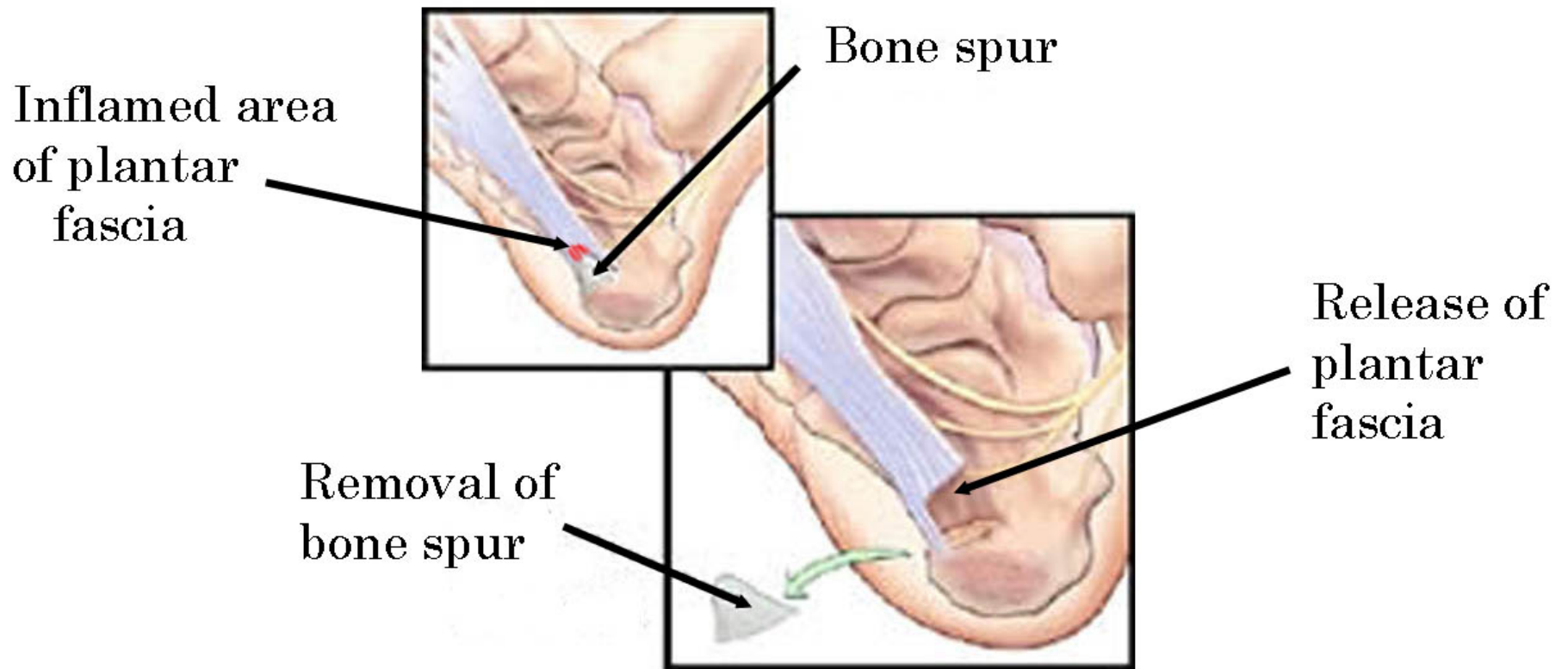


Cortisone Injection

- Don't inject the bottom of the foot
- Go medial, aim for the front edge of the calcaneus, ***touch the bone***
- 1cc steroid, 1cc lidocaine
- This shot hurts!



Surgery



Achilles Tendonitis



Treatment

- Calf stretches
- Night splints
- NSAIDS
- Casting
- **Cortisone injections are NOT recommended**
- Surgical debridement (rare)
- Not associated with tendon rupture (***unless injected***)



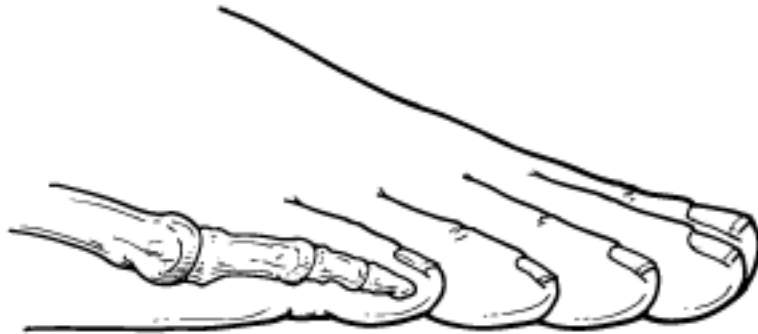
Bunions, Hammertoes and Corns



Bunions



Hammertoes

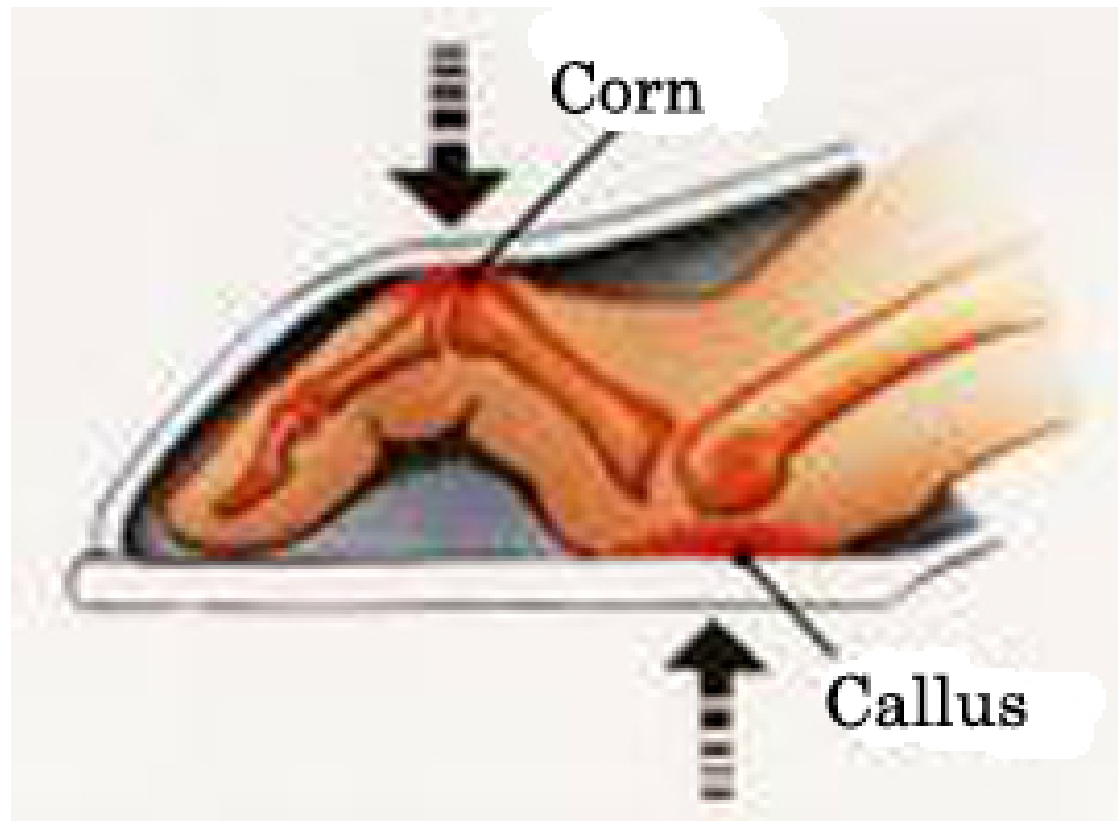


Normal toes



Hammer toes

Corns



Corns



Bunions, Corns and Hammertoes

- Very common
- Often asymptomatic
- Only need to treat if:
 - pain
 - skin breakdown

Conservative Treatment: Devices



Stick on pads
(bunions and hammertoes)



Toe spacers



Medial bunion pad



Abduction braces

Conservative Treatment

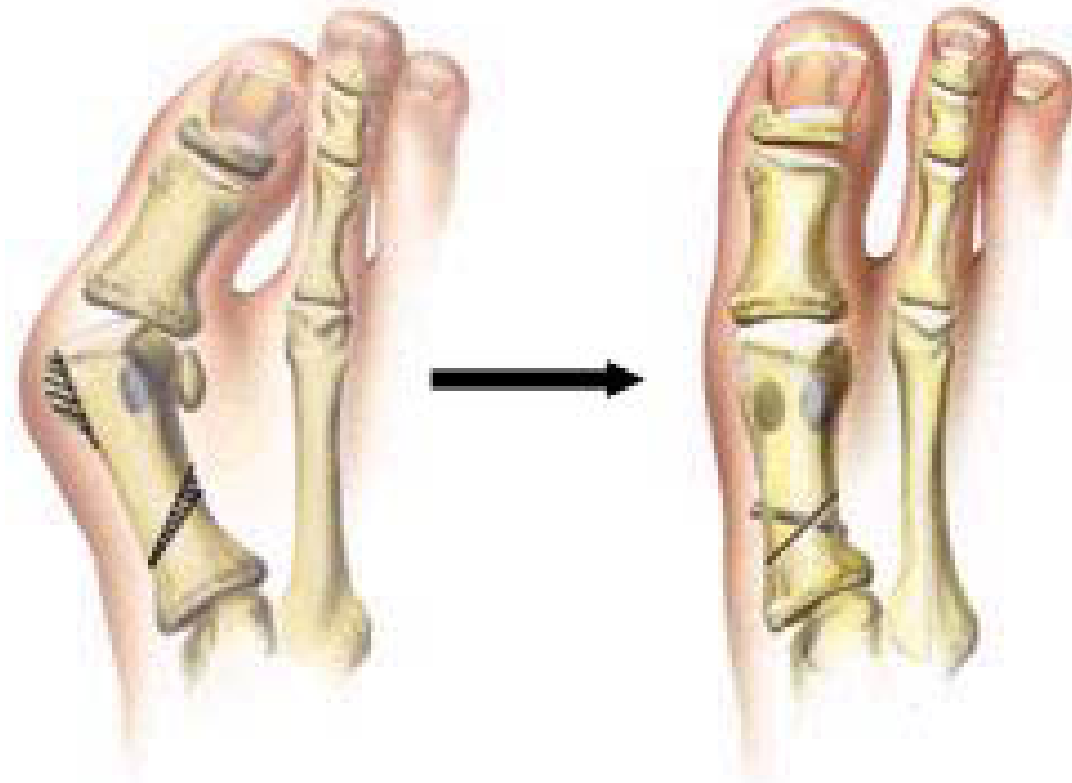
Orthopedic Shoes

- Wide, roomy toe box
- Soft
- Low heels
- Usually ugly



Surgery

- Pain
- Skin breakdown





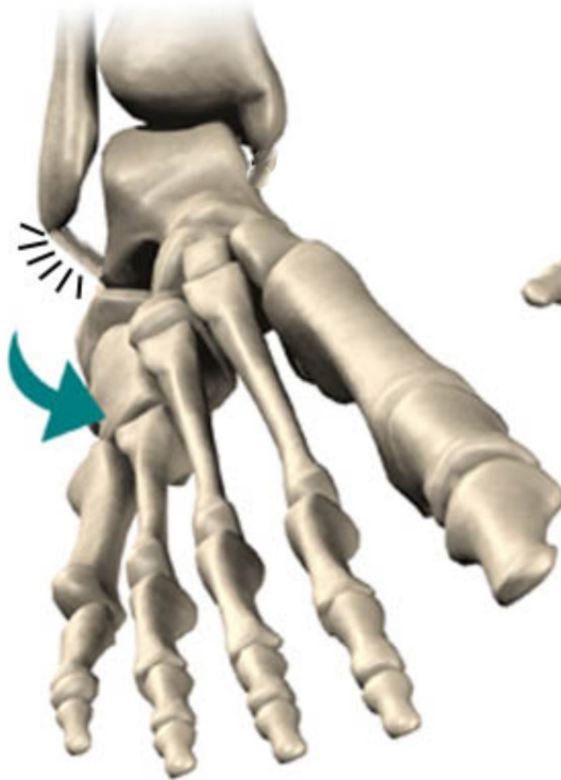
Ankle Injuries:

Sprains and Fractures



Ankle Sprain

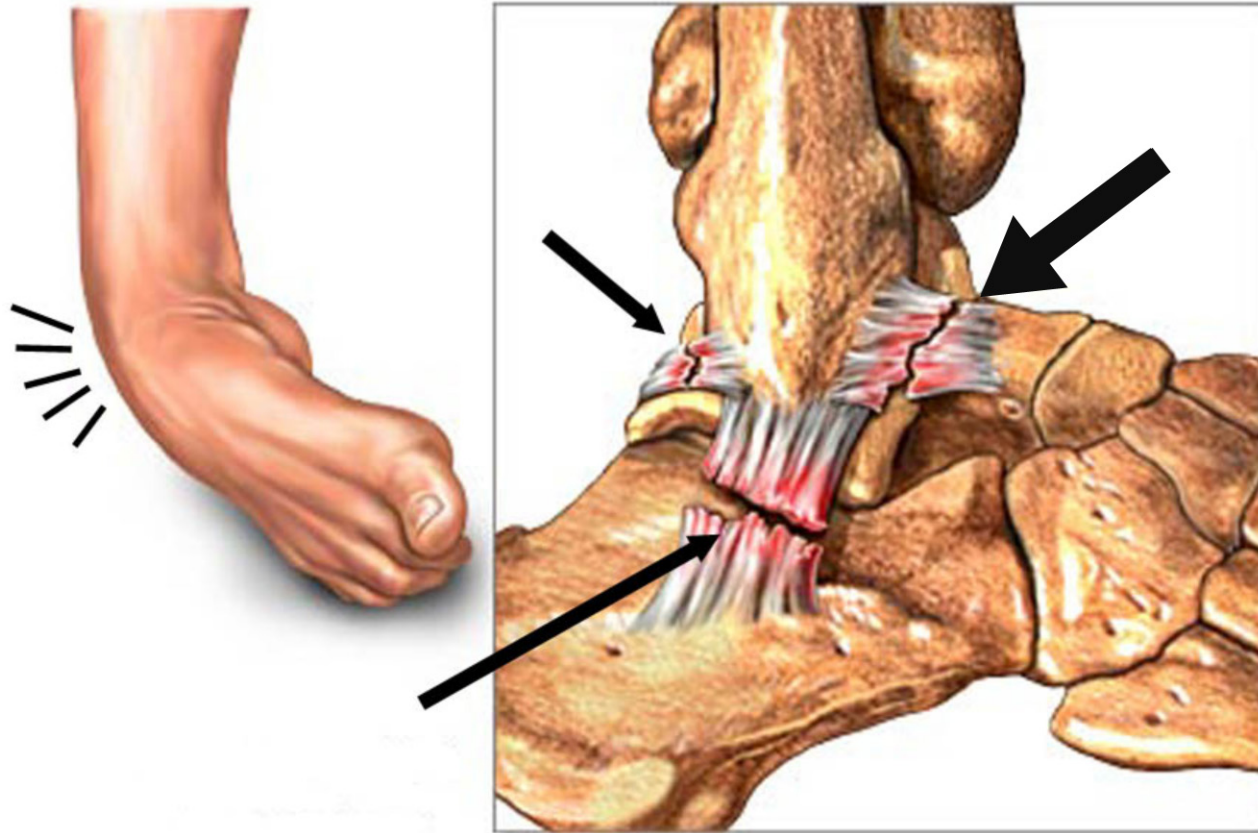
Inversion -
foot turns
inward
(medially)



Eversion -
foot turns
outward
(laterally)



Ankle Sprain



Inversion Sprain (most common)

Ankle Sprain

Treatment

- R.I.C.E. (rest, ice, compression, elevation)
- Air cast (full time 4 weeks, sports 4 more weeks)
- Crutches (if needed for comfort)
- Cast (3-6 weeks for severe cases)
- Wt bearing as tolerated

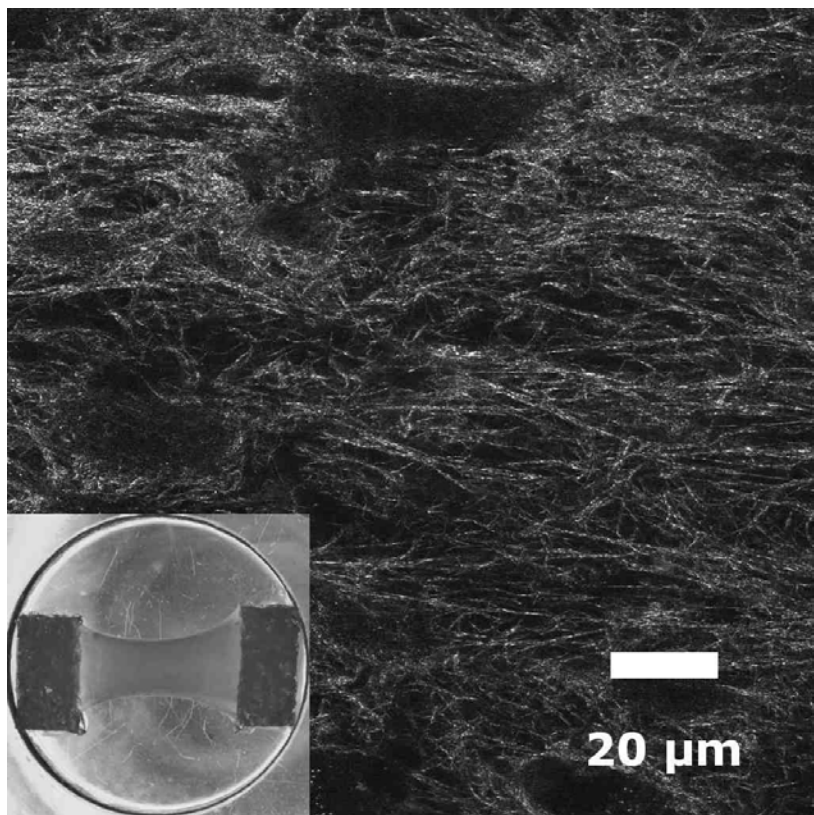
Ankle Sprain



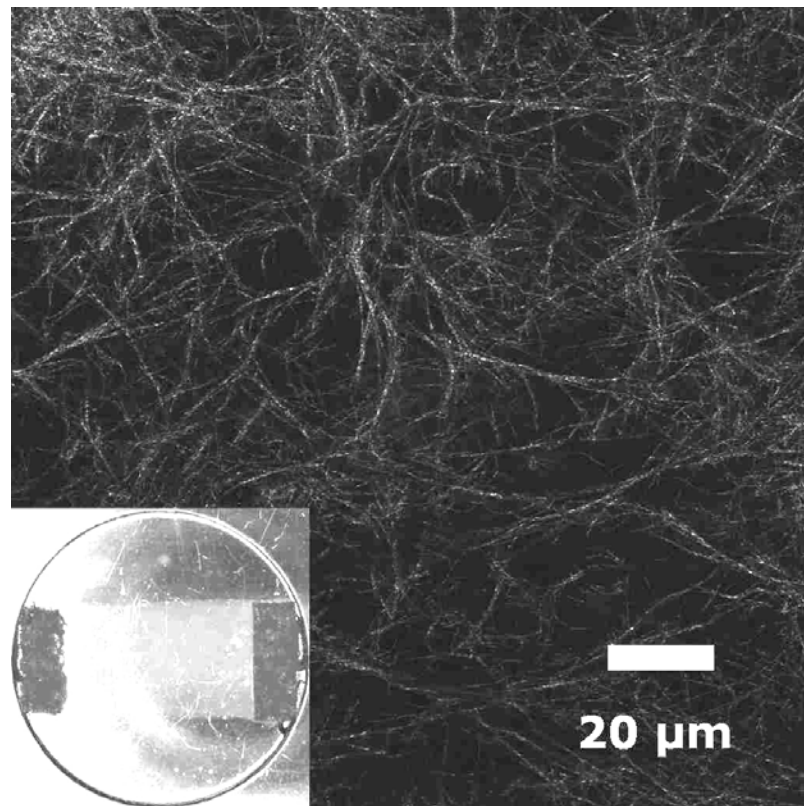
**Frank C, Woo S.L. et al, *Am J Sports Med.* 1983
Nov-Dec;11(6):379-89.**

- Created ligament injuries in rodents
- Compared immobilization to motion





Motion



Immobilization

When sprains don't get better...

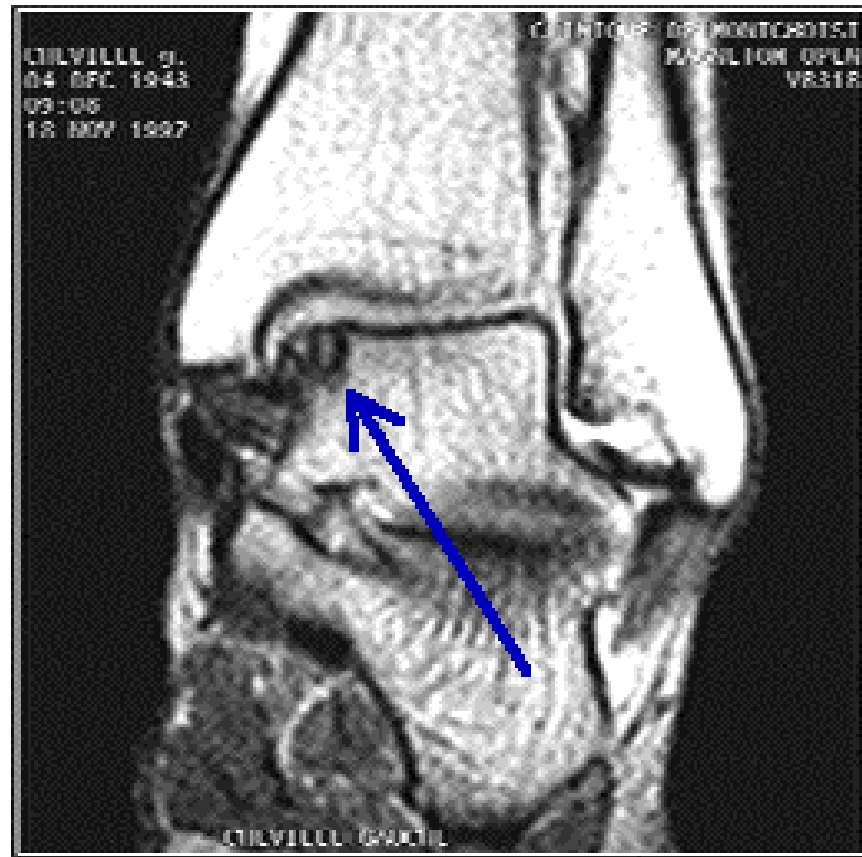
- Expect some degree of pain, stiffness and swelling for 6 - 12 weeks
- If symptoms persist, consider:
 - calcaneus anterior process fracture
 - chondral injury to talus
 - failure of the ligaments to heal

When sprains don't get better...



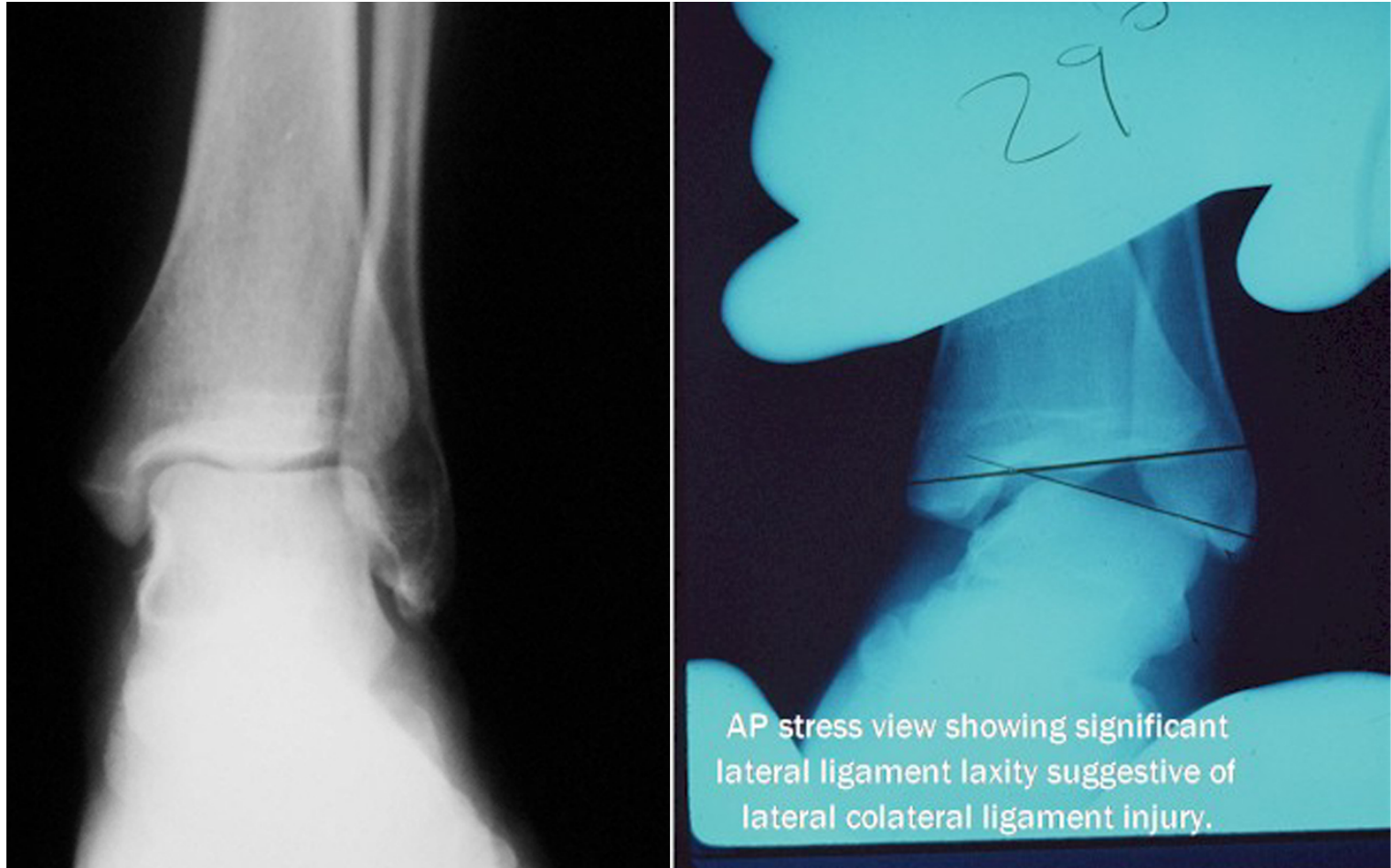
Calcaneus anterior process fracture

When sprains don't get better...



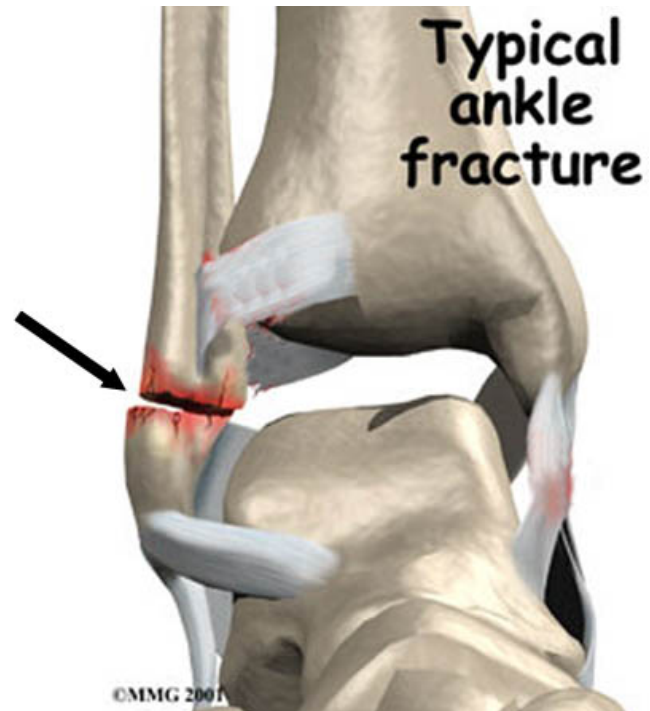
Chondral injury of the talus

When sprains don't get better...



Inversion stress x-ray showing failure of lateral ligaments
to heal

Ankle Fractures





Ankle Fracture



Ankle Fracture



Ankle Fracture









Sprain vs Fracture

Should we get an x-ray?

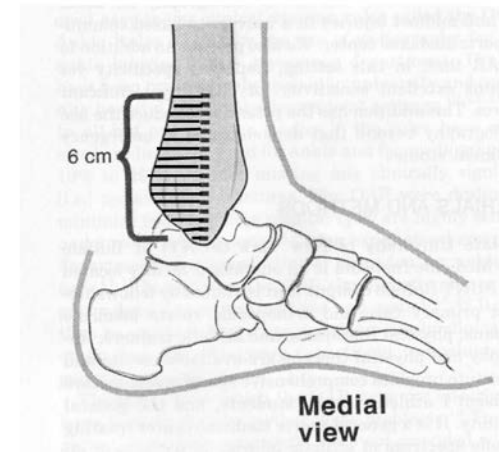
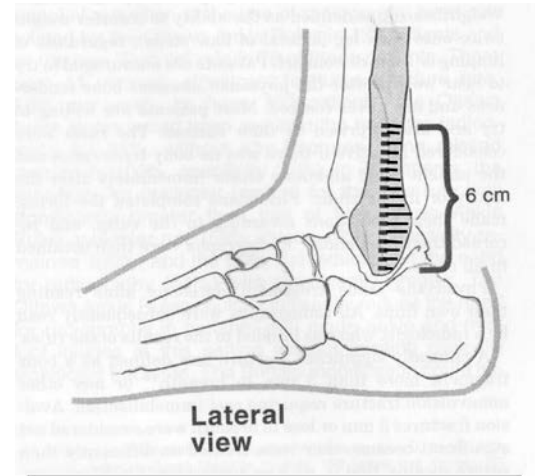


The Ottawa Rules

- Hx of trauma and malleolar ankle pain

and any *one* of:

- Age greater than 55
- Inability to bear weight
- Tender over posterior 6cm of medial *or* lateral malleolus



Stiell et al, Ann Emerg Med 1992; 21:384-390

Ankle Injury



Ottawa Rules



Positive for fracture

Non wt bearing, splint



Cast

Surgery



Negative for fracture



R.I.C.E

Air cast

Crutches (PRN)

Cast (PRN)

Wt bearing as tolerated