Foot Problems
Financial Disclosures
Anatomy
Anatomy

Phalanges

Phalanges
Anatomy

Metatarsals

Metatarsals
Anatomy

Tarsals
Anatomy

- Talus
- Calcaneus
Anatomy

- Tibia
- Fibula
- Medial Malleolus
- Lateral Malleolus
Common Foot and Ankle problems

• Morton’s Neuroma
• Plantar Fasciitis
• Bunions and Hammertoes
• Ankle Sprains and Fractures
Morton’s Neuroma
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 1 cm deep
- 1 cc steroid, 1 cc lidocaine
Treatment: Surgery
Plantar Fasciitis
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*

[Image: X-ray of foot showing a 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

- Inflamed area of plantar fascia
- Bone spur
- Removal of bone spur
- Release of plantar fascia
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
Hammertoes

Normal toes

Hammer toes
Corns

Corn

Callus
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

- 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

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