

Foot, Ankle, and Lower Leg

Injuries, Evaluation, and
Rehabilitation

Blisters

- Causes: friction/rubbing
- Signs: redness, pain, fluid build-up
- Could start as just a “hot spot”

Blisters



Blisters



Blisters



Blisters

- Prevention:
- vasoline
- band-aids
- 2nd skin & moleskin
- 2 pair of socks with 1st pair inside out
- Donut pad
- Do not cut the skin all the way off!

Callous

- A thickening or hardening of skin
- Develop over time
- Prevention/Treatment- Use of a file or scalpel to remove the layers of skin.



Callous Care



Corns

- Type of callous that form on top of toes.

Athlete's Foot

- Tinea pedis
- Fungal infection

Symptoms

- Scaling, flaking and itching of the affected skin.
- Blisters and cracked skin may also occur.





Image Courtesy of M. McGinnis
Copyright © 2000 Doctorfungus Corporation



Prevention

- Hygiene
- Keep feet and footwear as dry as possible.

Ingrown Toenail

- Result of toe nail growing into the skin of the toe.
- Signs- pain, redness
- Treatment- Stick cotton under the affected side.
- Let toenail grow and cut a “V” in the middle, so the toenail will grow to fill in the gap.

Ingrown Toenail



Ingrown Toenail



Bunion

- Injury to the bones and joint between the foot and the big toe.
- Causes: Long-term irritation from arthritis, poorly-fitting shoes, or heredity.
- Signs: the bones of the big toe to angle in toward and over the second toe, the foot bone (metatarsal) to angle out toward the other foot, and the skin to thicken (callus formation).

Bunions



Hammer Toe

- Condition where a toe assumes a bent downward position like a claw.
- Acquired: at birth, or from wearing short, narrow shoes.
- Symptoms: pain and corn formation on the top of the affected toe.
- Treatment: mild cases and cases in children can include foot manipulation and splinting of the affected toe. More severe cases may require surgery to straighten the toe joint.

Hammer toes



Hammer
toe

Contusions

- A “bruise”
- Cause: Direct blow to the foot. Wearing a shoe that has faulty cleats or spikes or wearing a wrinkled sock. This will cause a “stone bruise.”
- Symptoms: Pain, tenderness, discoloration, and restricted motion.

Contusions

- Treatment:
- R- Rest
- I- Ice
- C- Compression
- E- Elevation

Contusions





Turf Toe

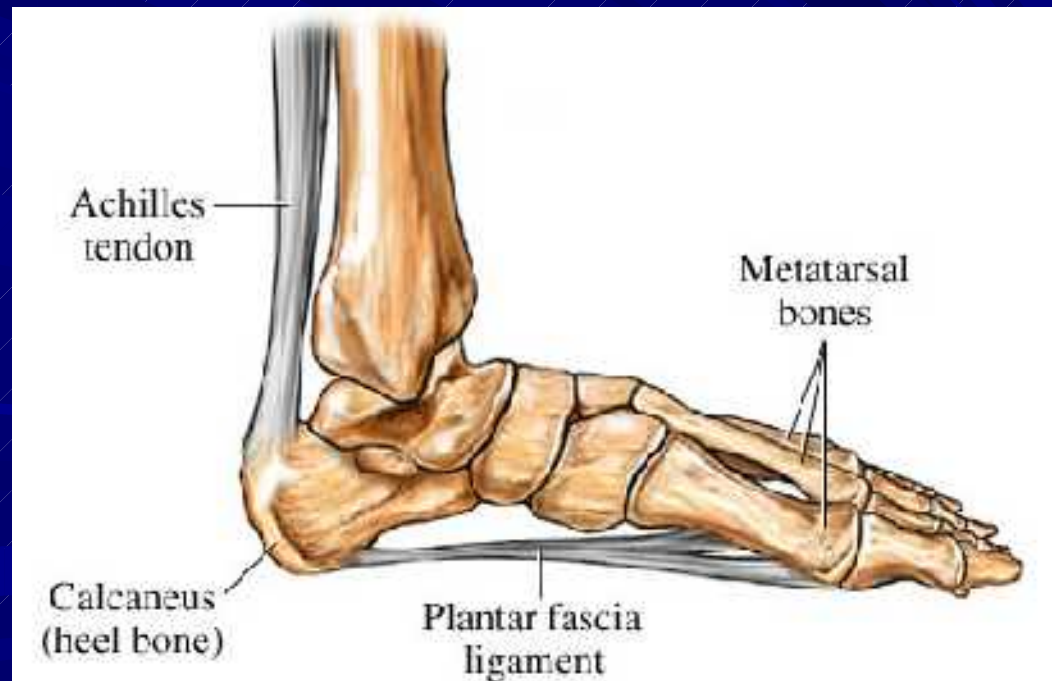
- A condition of pain at the base of the big toe, located at the ball of the foot.
- Cause: jamming the toe, or pushing off repeatedly when running or jumping.
- Signs: **pain!!!** at the base of the big toe, but you may also have stiffness and swelling in the joint.
- Treatment: R.I.C.E. and turf toe taping.

Turf Toe



Plantar Fasciitis

- Plantar fasciitis means “inflammation of the plantar fascia.”
- Also can be known an “arch sprain”.



Plantar Fasciitis

- Causes: Overuse
- Symptoms:
 - Stiffness and pain in the morning or after resting that lessens after a few steps but gets worse as the day progresses.
 - Pain that gets worse when you climb stairs or stand on your toes.
 - Pain after you stand for long periods.

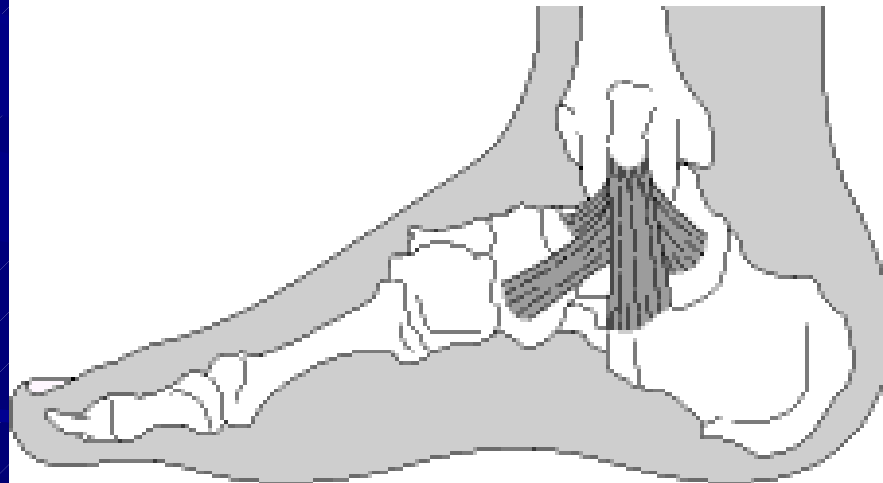
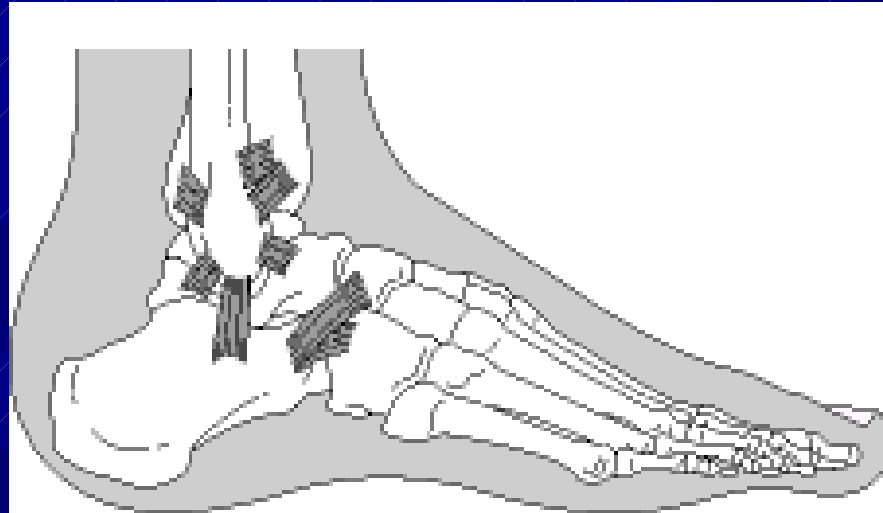
Plantar Fasciitis

- Treatment: R.I.C.E., stretching, and Plantar fascia taping.

Inversion ankle sprains

- Inversion ankle sprain injures the lateral ligaments of the ankle.
- About 90% of all ankle sprains are inversion sprains.





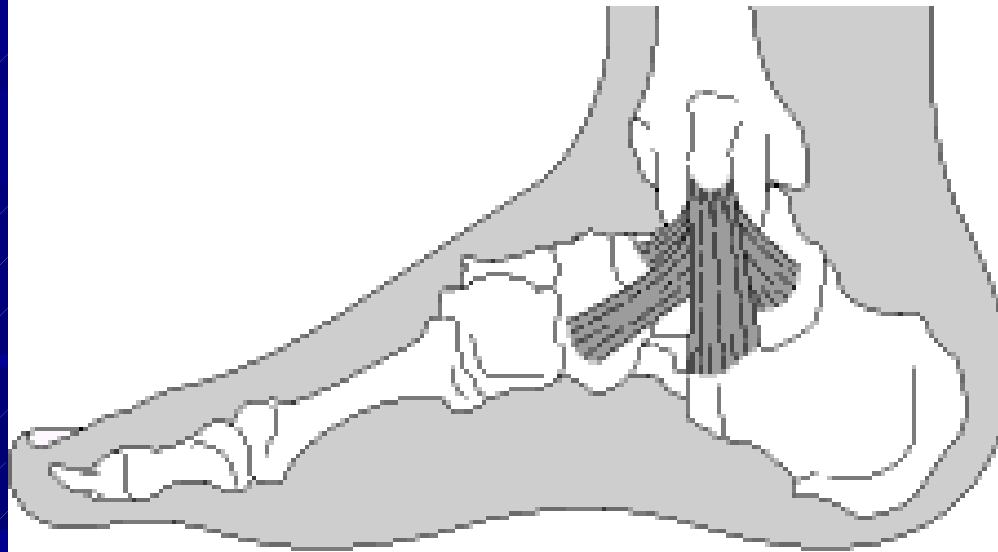
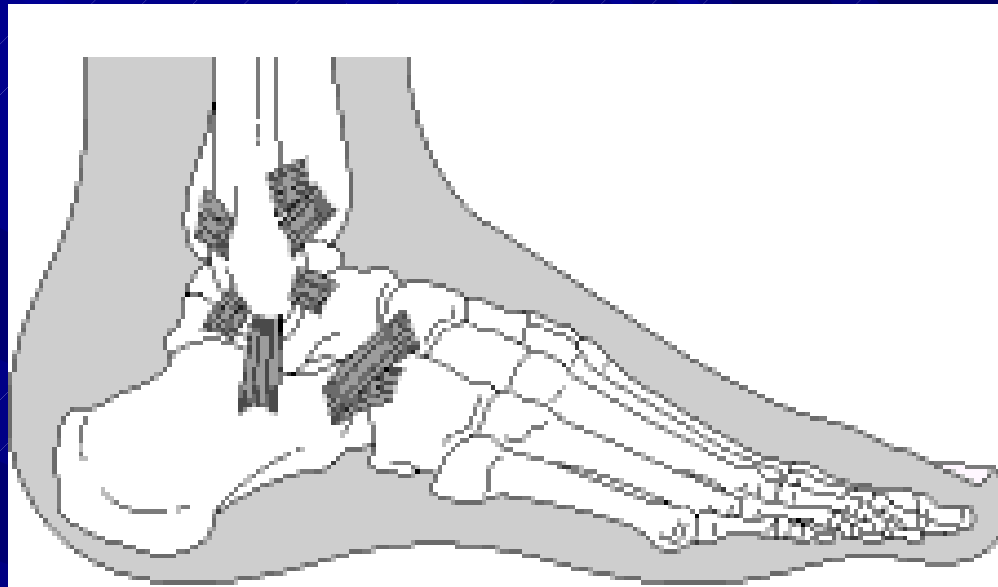
Ankle ligaments

Inversion



Eversion ankle sprain

- Eversion ankle sprains injure the medial ligament of the ankle.
- These are usually the result of some sort of force to the lateral aspect of the ankle.



Ankle ligaments

Eversion sprain



Severity of ankle sprains by Grade

Sign/symptom	Grade I	Grade II	Grade III
Tendon	No tear	Partial tear	Complete tear
Loss of functional ability	Minimal	Some	Great
Pain	Minimal	Moderate	Severe
Swelling	Minimal	Moderate	Severe
Ecchymosis	Usually not	Frequently	Yes
Difficulty bearing weight	No	Usually	Almost always

Ankle swelling



Ankle discoloration



Ankle swelling/discoloration



Ankle dislocation

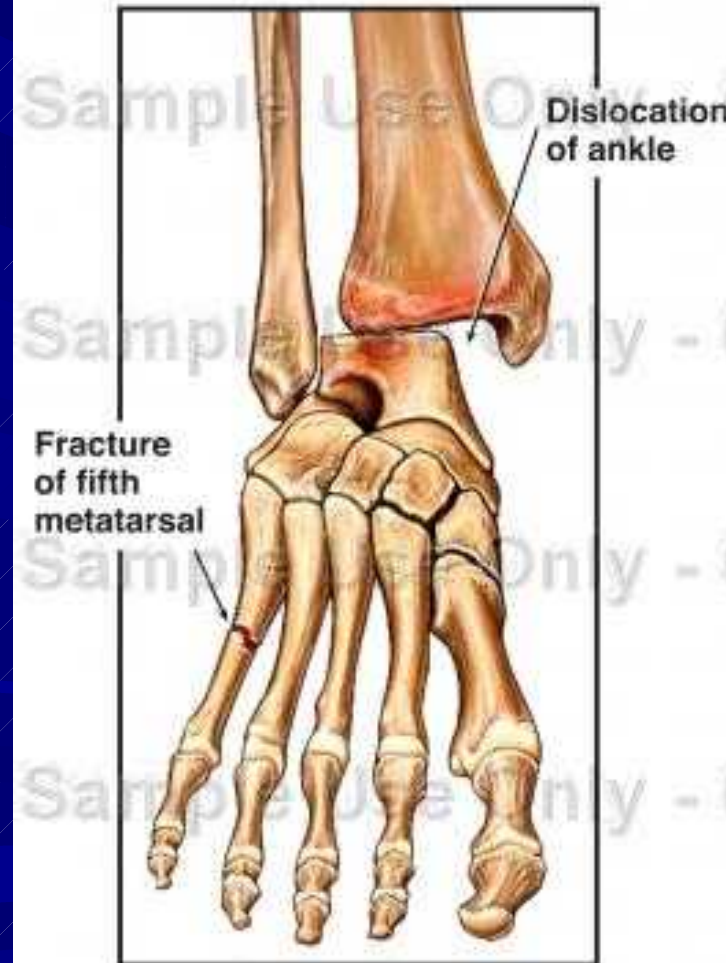
- An injury to the ankle so that the bones are displaced and are no longer in the correct alignment.
- Ankle dislocations are almost always associated with sprains and fractures.

Signs and Symptoms of Ankle Dislocations

- Excruciating pain
- Loss of ankle function
- Numbness or paralysis in the foot

Ankle dislocation

Fractured (Broken) Foot Bone and
Dislocated Ankle Joint

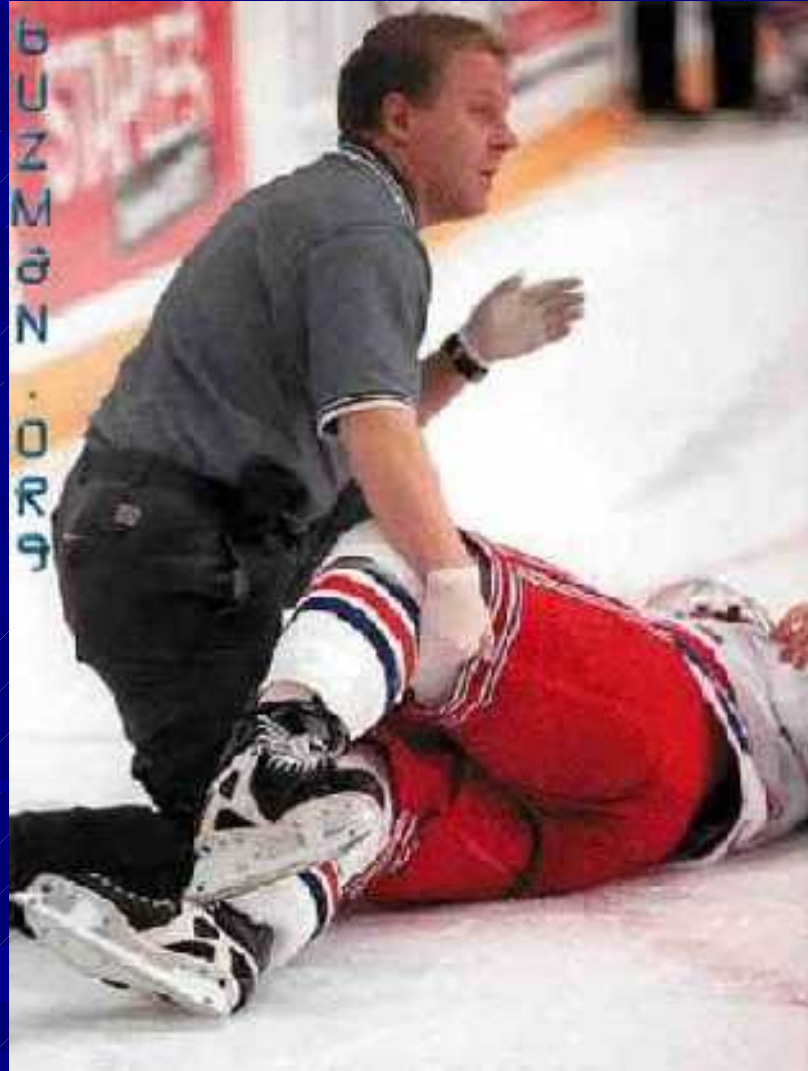


Anterior view of right ankle

Ankle dislocation



Fracture/Dislocation



Dislocation



Open dislocation



Achilles Tendonitis

- The achilles tendon can become inflamed through overuse. Through running and jumping activities.
- Symptoms will include: pain, swelling, and possibly crepitis.
- Treatment will include: RICE and taping.

Achilles Tendon rupture

- Injury often occurs during sports that require bursts of jumping, pivoting, and running.
- Signs- inability to plantarflex foot

Achilles Tendon rupture



Inability to plantarflex



Before surgery



Avulsion Fracture

- Occurs from just the right kind of inversion motion to the ankle.
- Pain over the 5th metatarsal of the foot.

Jones Fracture

- Fracture to the base of the 5th metatarsal.



Jones Fracture



Stress Fracture

- Most stress fractures occur in the weightbearing bones of the lower leg and the foot.
- More than 50 percent of all stress fractures occur in the lower leg.
- Stress fracture to a metatarsal is known as a “March Fracture”.

Signs and Treatment of Stress Fracture

- Pain with weight-bearing and activity.
- Will not show up on an X-ray for usually 2-3 weeks.
- The most important treatment is rest.
- Need to engage in a pain-free activity.
- New/proper footwear
- Usually takes about 4-8 weeks to heal.

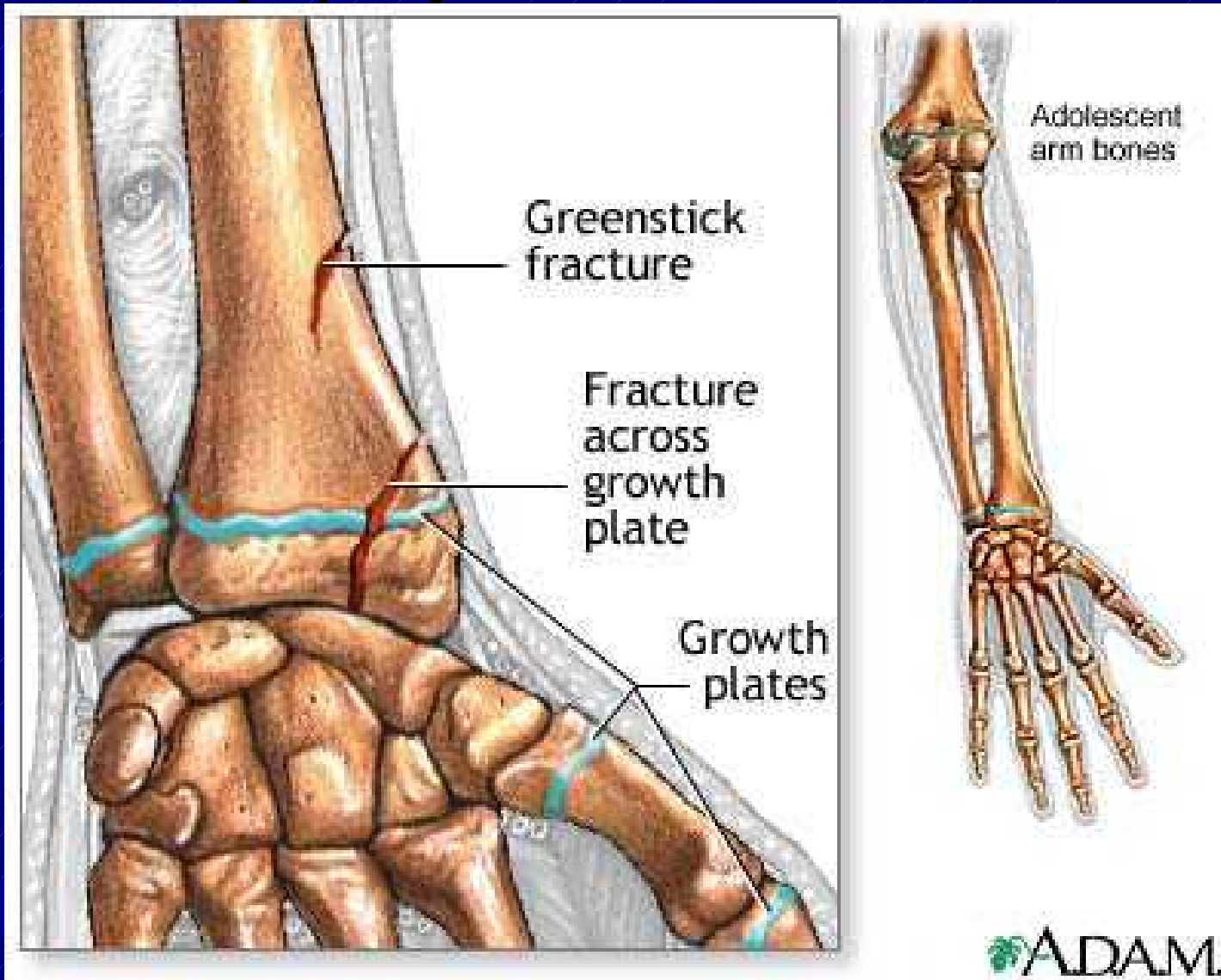
Shin Splints

- Called “Medial Tibial Stress Syndrome”
- Usually occurs in athletes who run in shoes with poor support, who run on hard surfaces and don't change it up, or who have flat feet.

Shin Splints

- Treatment: ICE and rest are the best.
- Can tape if there is a situation where the arch becomes involved.

Epiphyseal Fracture



Epiphyseal fracture



Anterior Compartment Syndrome

- Occurs from a direct blow or from overuse.
- You will lose dorsiflexion of your ankle, and you will have an extreme amount of pain.
- Tibialis Anterior muscle will feel hard to the touch.

Morton's toe

