Easing Foot and Ankle Pain

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Boulder Community Health

Boulder Centre for Orthopedics

About Me

Boulder Community Health

Education, Training & Affiliations

MedStar Union Memorial Hospital
Baltimore, MD
Orthopedic Foot and Ankle Surgery Fellowship

University of Louisville School of Medicine
Louisville, KY
Doctor of Medicine

University of Washington
Harborview Medical Center
Seattle, WA
Orthopedic Surgery Residency

The University of Texas at Austin
Austin, TX
Bachelor of Science

Specialties

- Achilles tendon reconstruction
- Ankle arthroscopy
- Arthritis care
- Bunion & hammertoe surgery
- Cartilage repair and restoration
- Flatfoot reconstruction
- Joint injections
- Minimally invasive surgery
- Surgical fracture care
- Total ankle replacement

About Me

Boulder Community Health

Overview

Boulder Community Health

- Anatomy of the Foot & Ankle
- Common Conditions
- Nonsurgical Treatments
- Operative Treatments

Overview

Boulder Community Health

- **Anatomy of the Foot & Ankle**
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Anatomy of the Foot and Ankle

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- 30 bones (at least)
- Over 33 joints/articulations
- Over 100 muscles, tendons, ligaments, soft tissue connections
- Complex!

Overview

Boulder Community Health

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Arthritis

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- What is arthritis?
  - Pain + inflammation of joints
  - Caused by cartilage thinning, degeneration over time
  - Multiple causes
    - Most common: age-related wear and tear

Arthritis

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- Waxing and waning pain
  - Some days better than others
- Pain with increased activity
  - Often better with rest
- Often responds to anti-inflammatories
- Swelling around affected joint
- Tender to touch
- ANYWHERE

Tendinitis

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- What is tendinitis?
  - Inflammation of tendons resulting in pain, swelling
- Common locations:

Peroneal Tendinitis

Posterior Tibial Tendinitis

Achilles Tendinitis

Tendinitis

Boulder Community Health

- Overuse-related condition
- Activity-related pain
  - Often improves with rest
- Can be associated with swelling over affected tendon
- May have underlying partial tearing of tendon
- Often responds to anti-inflammatories

Plantar Fasciitis

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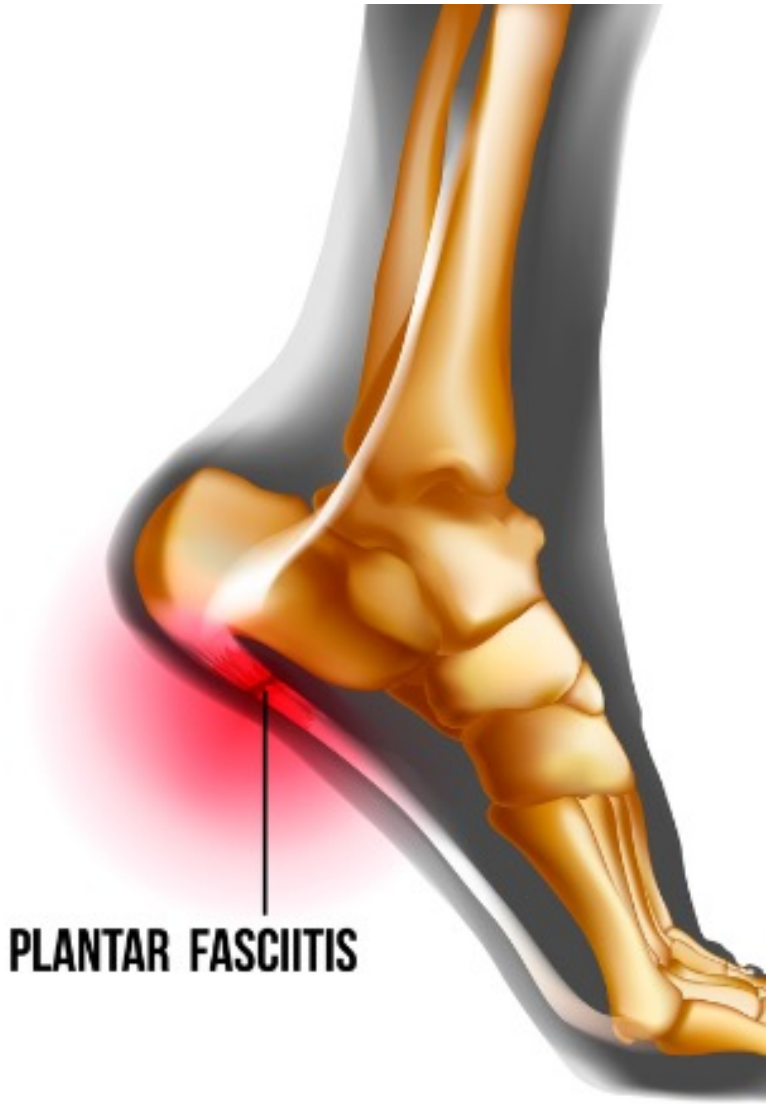
- Thick band of tissue supporting the arch of the foot
- Repetitive overuse can cause microtears resulting in inflammation
- Very common condition

Plantar Fasciitis

Boulder Community Health

- Pain usually in plantar heel
  - Can also be in arch of foot plantarly as well
- Often worst pain in the morning, after prolonged sitting
  - Prolonged ambulation
- Risk factors
  - Obesity
  - Calf tightness
  - Endurance activities (dancing, running)



Bunions

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- What is a bunion?
  - Lateral deviation of the big toe
  - Bump on the inside of the foot
- More common in women
- Risk factors
  - Narrow-toe shoe wear
  - Genetic predisposition
  - High heels

Bunions

Boulder Community Health

- Pain just under big toe
  - Medially over bump
- Pain worse w/ narrow shoes
- Big toe can cross under 2nd toe in severe cases
  - Hammertoes
- Deformity typically progresses over time

Stress Fractures

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- Overuse-related fracture
  - Repetitive trauma results in development of fracture
- Can be anywhere in the foot
  - Metatarsals (toes)
  - Calcaneus (heel)
  - Fibula (ankle)
- Risk factors
  - Low Vitamin D
  - Poor nutrition
  - High impact activity

Stress Fractures

Boulder Community Health

- XRs are often normal
  - May show bone healing
- Painful
  - Usually able to localize worst pain to one spot
- Pain w/ activity or weightbearing
  - Better with rest
- Associated swelling

Ankle Sprains

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- Most common reason for missed athletic participation
- Typically from inversion injury
- Sprains on a spectrum
  - Mild -> Severe

Ankle Sprains

Boulder Community Health

- Bruising
- Swelling
- PAIN!
  - Often on lateral side of ankle
- May or may not be able to bear weight
- Symptoms can mimic a fracture
  - When in doubt, get an XRAY!

Fractures

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- Resulting from trauma
  - Sometimes with minimal energy
- Can involve any bone in the foot & ankle

Fractures

Boulder Community Health

- Severe swelling, bruising
- Pain
- Typically unable to bear weight
  - But bearing weight does not rule out fracture!
- Recommend urgent XRAY
- Treatment can be operative or non-operative

Overview

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Nonsurgical Treatment

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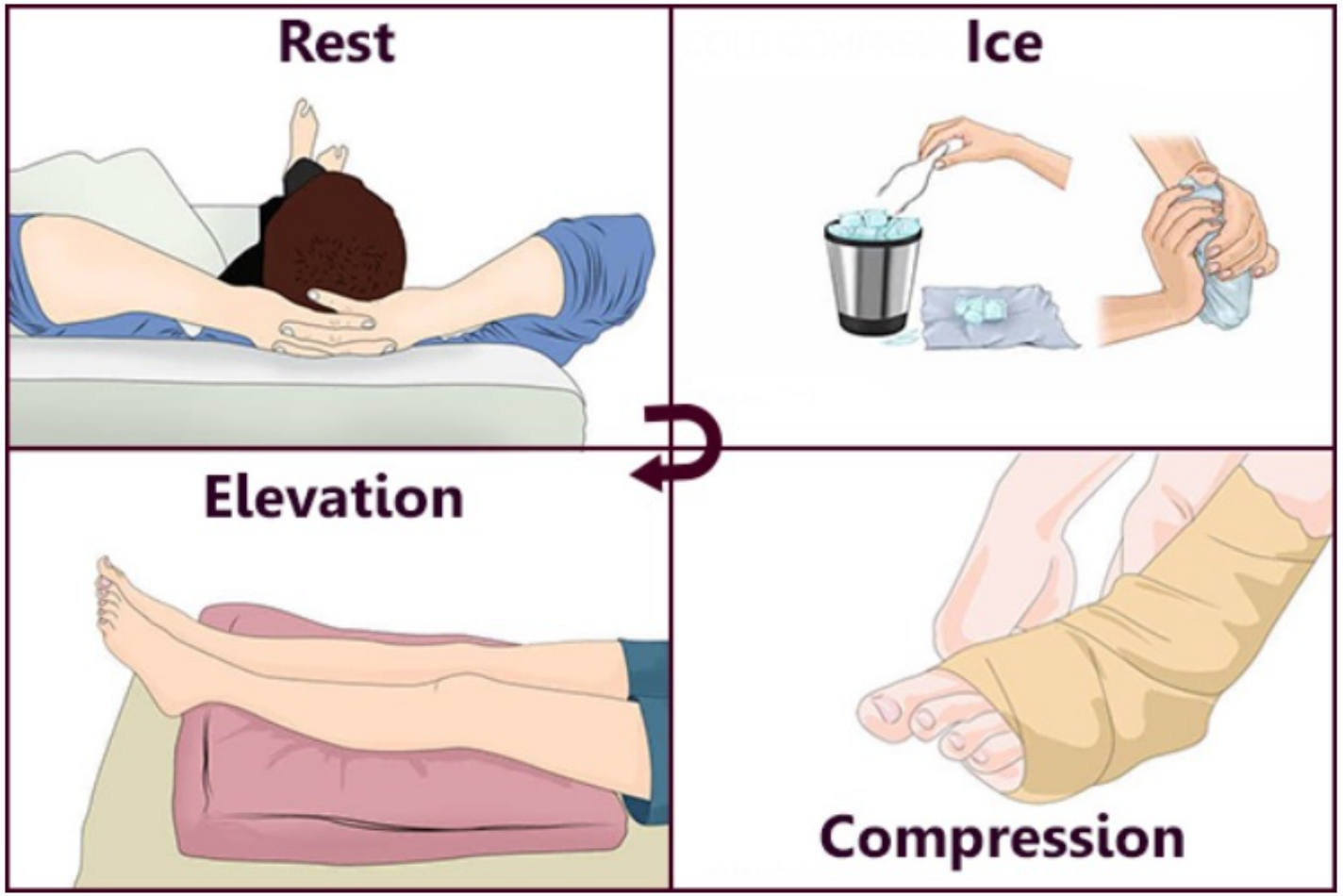
- 1st line treatment for any condition
  - RICE!
- Rest
- Ice
- Compression
- Elevation



Nonsurgical Treatment

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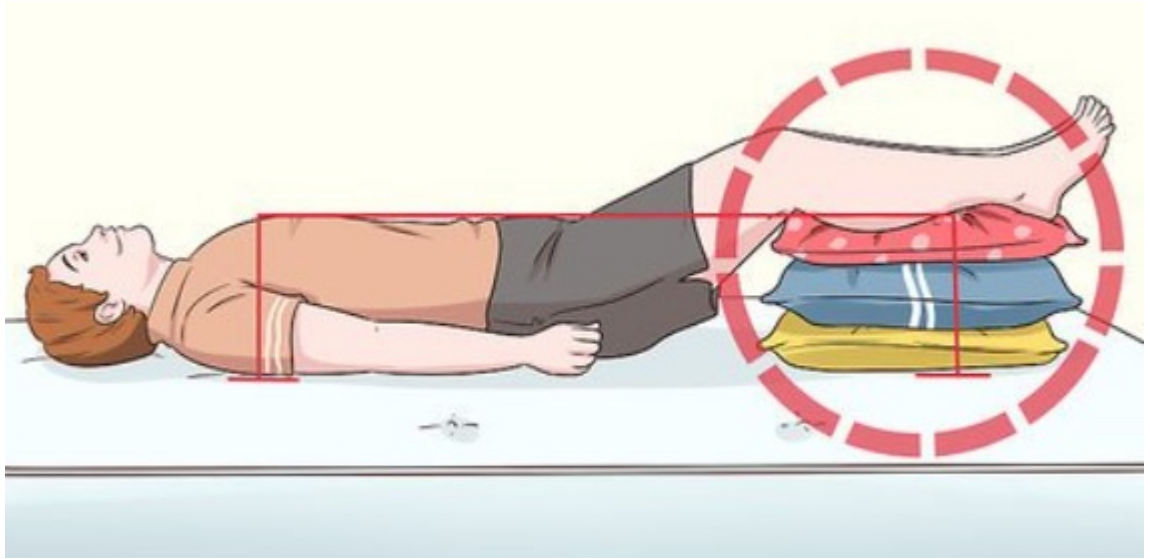
- Rest
  - Many conditions are from overuse
  - Important!
- Ice
  - Often more beneficial than heat in acute inflammatory phase
- Compression
  - Helps with swelling
- Elevation
  - Helps with swelling and pain
  - Above the level of the heart



Nonsurgical Treatment

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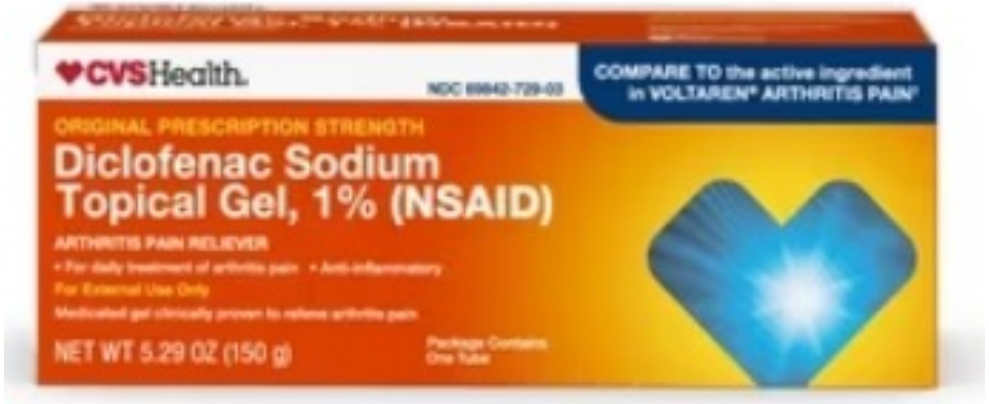
- Anti-inflammatories
  - Critical for pain relief and swelling aid
- NSAIDs
  - Non-Steroidal Anti-Inflammatory Drugs
  - Mainstay of treatment
  - i.e. ibuprofen (Advil), naproxen (Aleve)
  - Oral version may cause GI upset
    - Topical versions exist
  - Recommend 3 week continuous course for most conditions



Nonsurgical Treatment

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- Immobilization
  - Helpful in the initial stages of pathology
  - Particularly if symptoms are getting worse
  - Cast, boot, brace
- Theory is to stabilize foot & ankle and allow for healing to occur
  - Can result in stiffness (by design)
  - Often helps pain significantly

Nonsurgical Treatment

Boulder Community Health

- Type of immobilization depends on severity of condition
- In general, will transition from boot to a brace as condition improves
  - Often may start with a brace if symptoms not severe

Nonsurgical Treatment

Boulder Community Health

- Supportive Shoes
  - Generally good for overall foot & ankle hygiene
- The thicker the sole, the more support given
  - Cushions the foot
- Less flexibility in the shoe/sole, the better
  - Offers less motion through the foot, thus less painful
- Wide toe-box shoes
  - Particularly helpful for bunions
- Preventative

Nonsurgical Treatment

Boulder Community Health

- Orthotics
  - Over the counter versions work for most people
    - Unless have unique foot shape or severe pathology
  - Goal is to provide cushion and support
- Many different types exist
- Recommend trying several different styles and see what feels best!

Nonsurgical Treatment

Boulder Community Health

- Additional equipment
  - Heel Cups
  - Night Splints
  - Metatarsal Pads
  - Toe spacers

Nonsurgical Treatment

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- Physical Therapy
  - Important part of recovering from any condition!
  - Typically do not begin immediately, wait until after period of immobilization to decrease inflammation
  - Home Exercise Program
- Preventative Stretching
  - Recommend incorporating into daily routine
  - Particularly calf stretches

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Operative Treatment

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- Arthritis Care
  - Joint replacement or joint fusion, depending on severity, joint involved, and patient factors
  - Also can consider arthroscopic surgery

Operative Treatment

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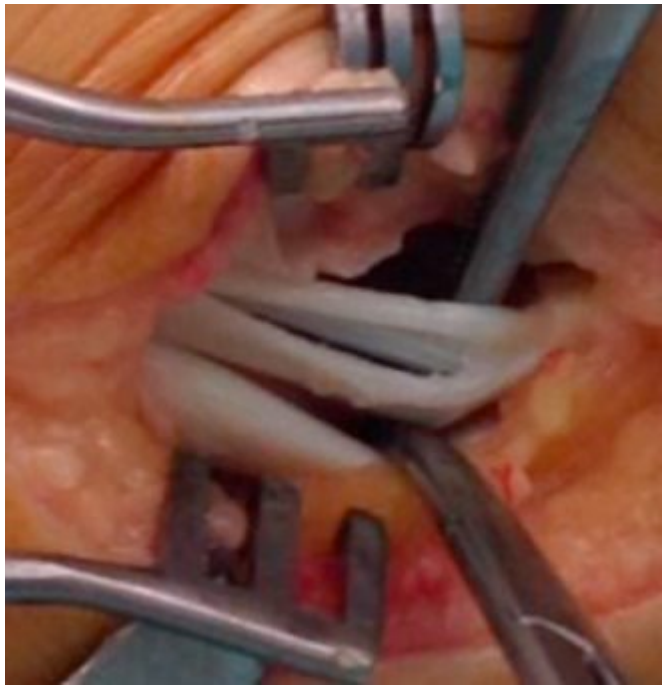
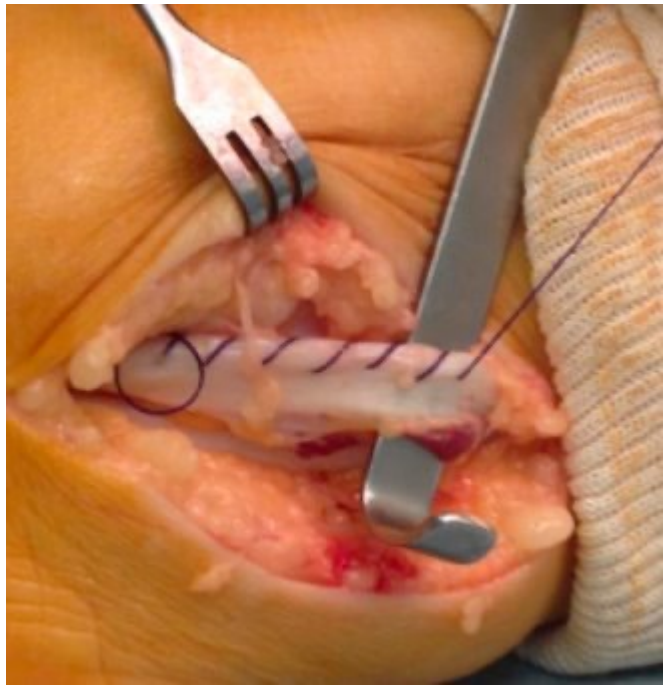
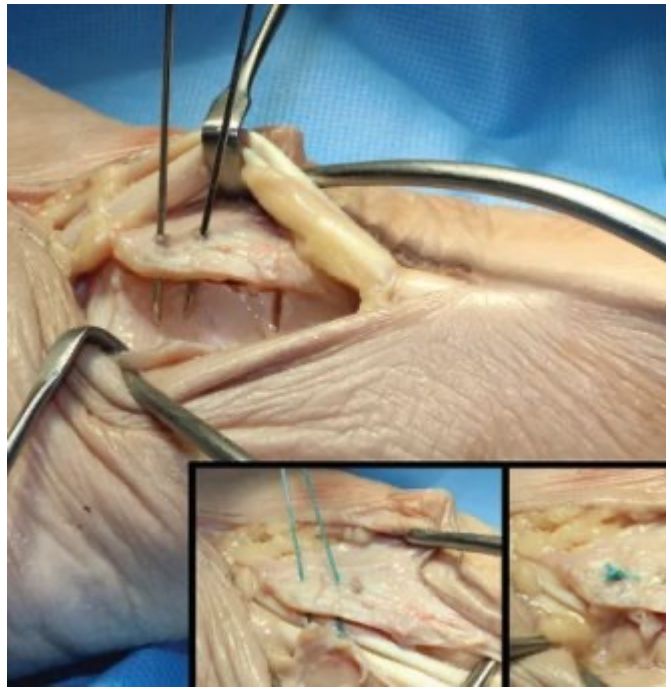
- Peroneal Tendinitis
  - Typically associated w/ tears or instability (if progressing to operative)







Operative Treatment

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- Achilles Tendinitis and/or Rupture
  - Minimally invasive or open options

Operative Treatment

Boulder Community Health

- Bunion Surgery
  - Minimally invasive or open options

Operative Treatment

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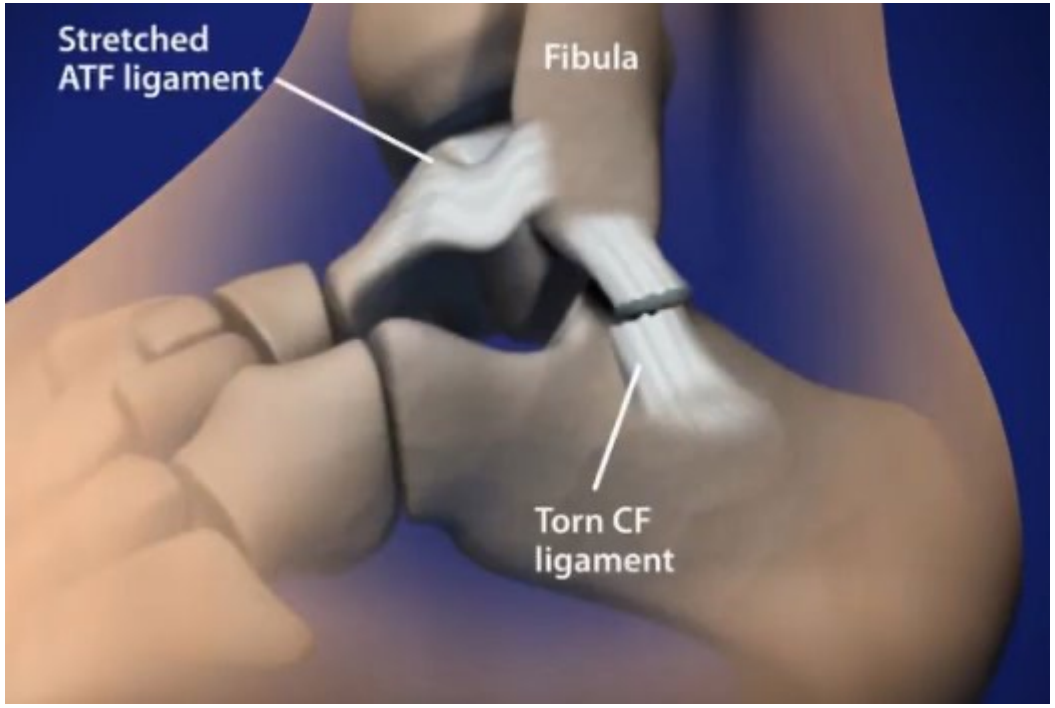
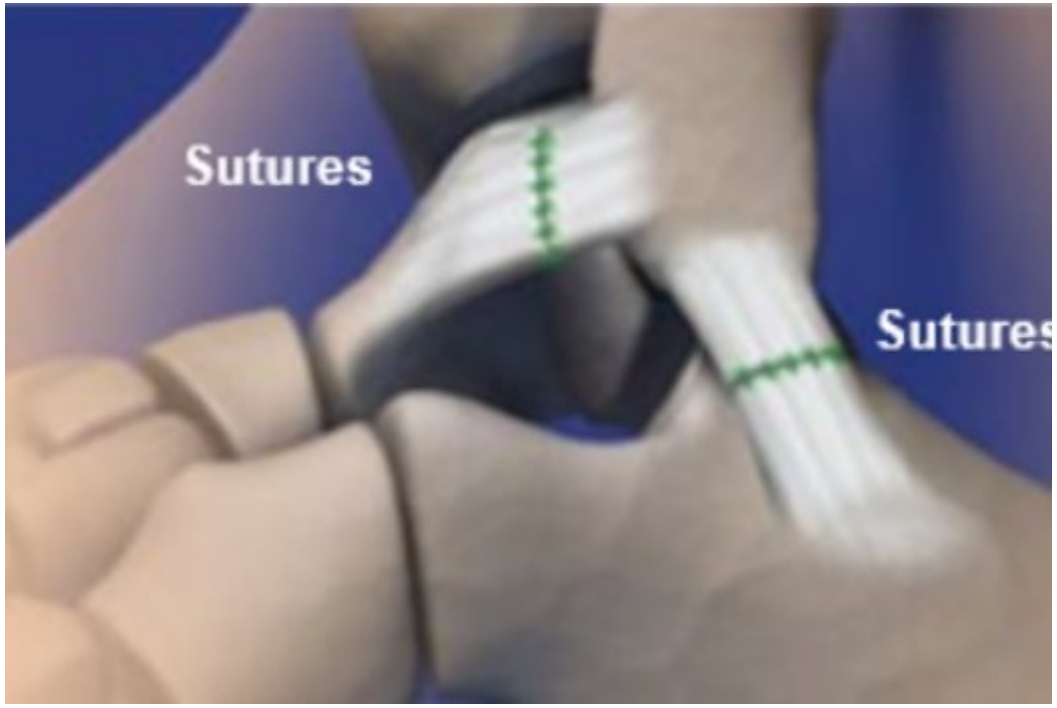
- Ankle Sprain Surgery
  - For those with recurrent instability





Operative Treatment

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- Fracture Surgery

Thank you!

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