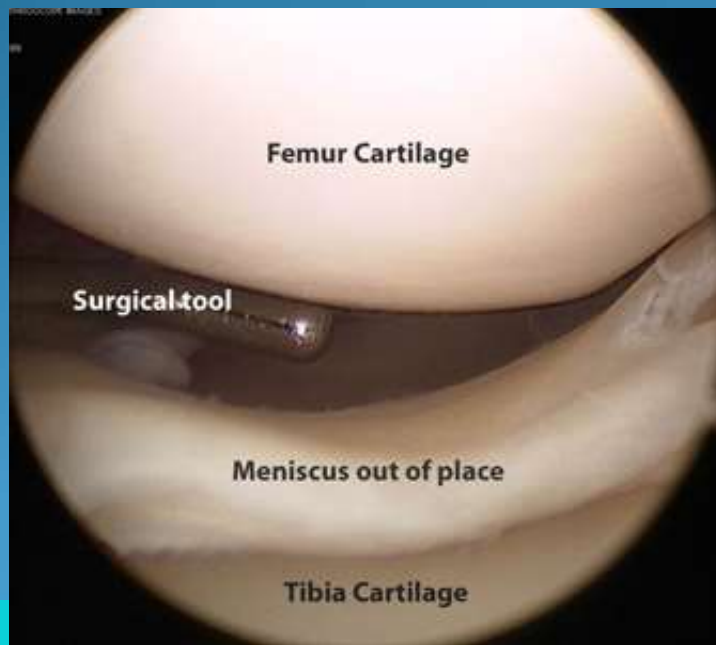


Suzanne L Miller
Boston Sports and Shoulder
New England Baptist Hospital
May 2, 2017



*Work Related Injuries Workshop
May 1st & 2nd, 2017*

Knee Anatomy - Meniscus

- Load-sharing
- Shock absorption
- Joint stability
- Joint nutrition
- Joint congruency
- Articular cartilage protection



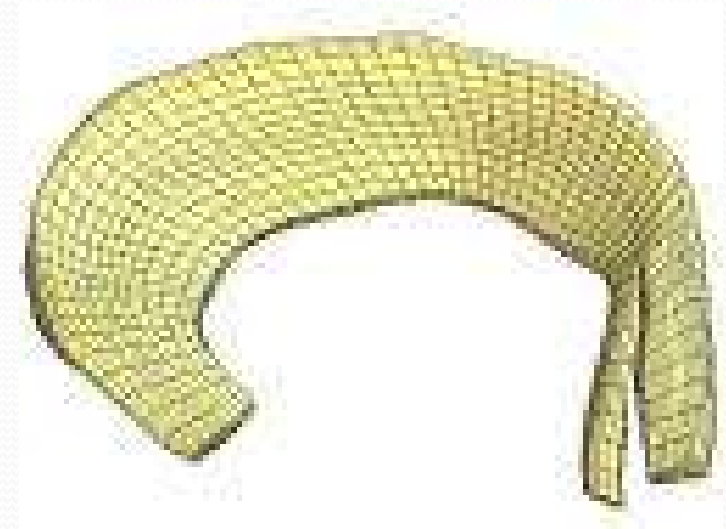
Blood Supply

- Geniculate vessels form perimeniscal plexus
 - Penetrates 10%-30% of outer MM/LM*
- Peripheral synovial fringe
 - Participates in healing response



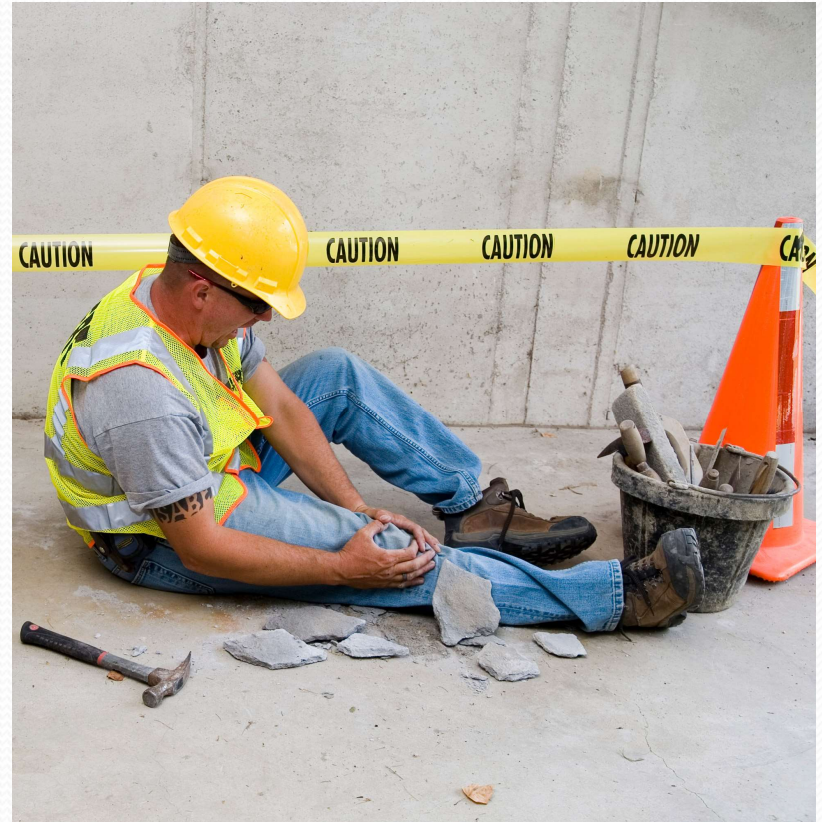
Biomechanical Properties

- Load Transmission
 - Hoop stresses
 - resisted by circumferential fibers
 - Shear stresses
 - resisted by radial fibers
 - Solid-Fluid phases
 - provide viscoelasticity



Meniscus Tears

- Mechanism: Twisting injuries
 - Slips and falls
 - Twisting motion
 - Hyperflexion
- Symptoms-Pain
 - Swelling
 - Mechanical symptoms

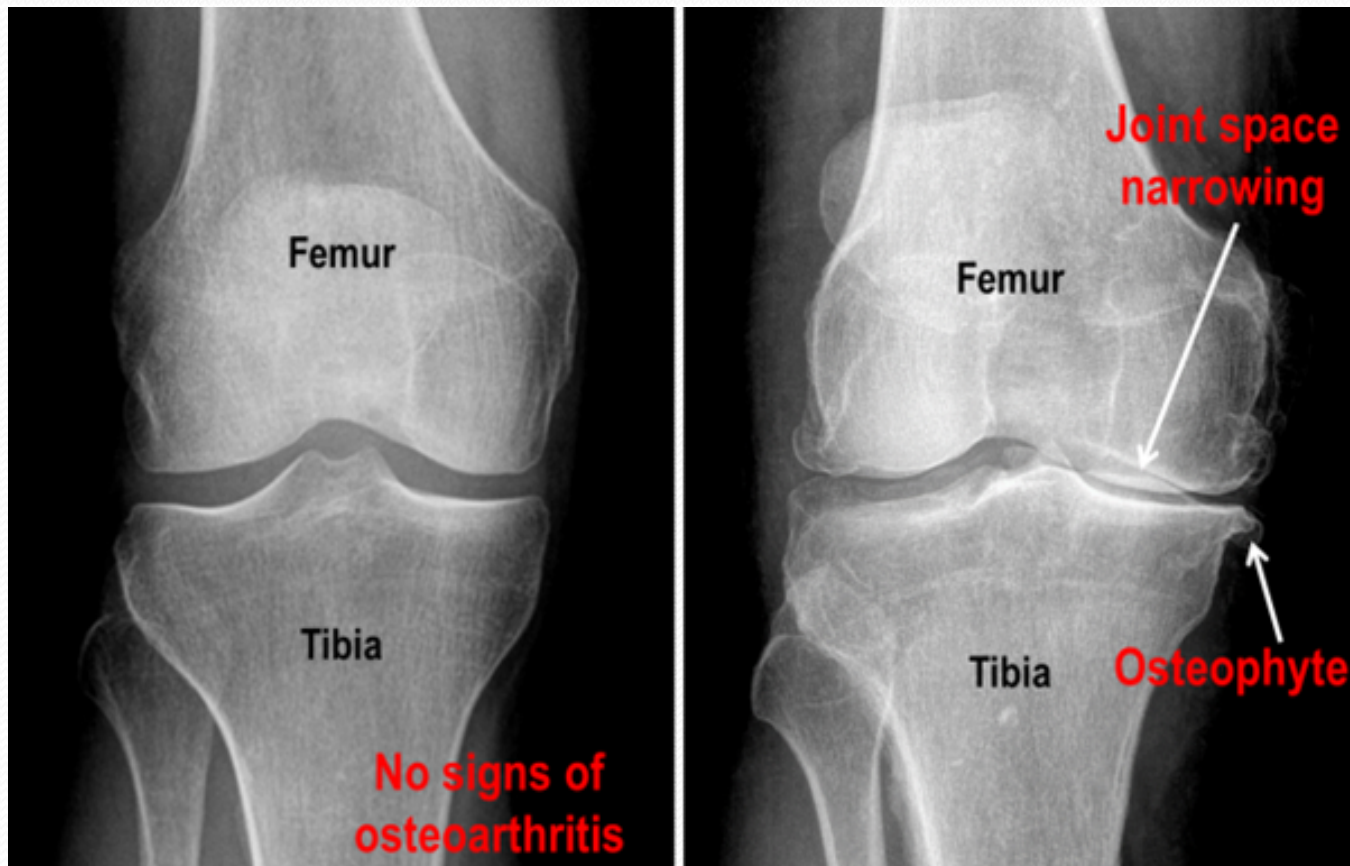


Meniscus Tears

- Diagnosis:
 - History
 - ? Prior injuries or surgery
 - Physical Exam
 - Joint line tenderness
 - McMurrays test, swelling
 - Xrays (assess OA!!!!!!!)
 - MRI - confirm
- Other diagnosis
 - Ligament injuries
 - Arthritis
 - Synovitis

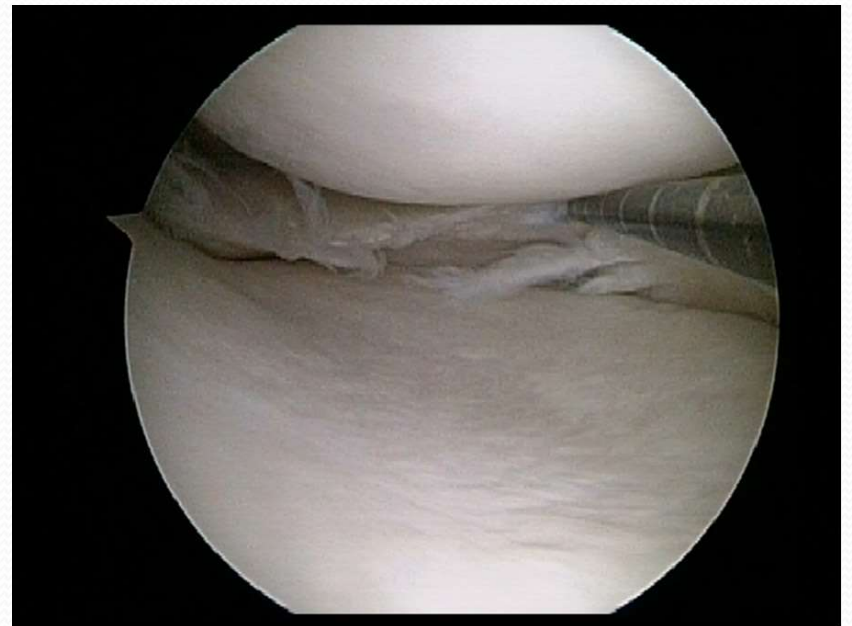


Must Assess for Osteoarthritis!



Meniscus Tears

- Non Operative
 - Therapy
 - Aspiration and Cortisone Injections
 - Knee brace
 - Activity modification



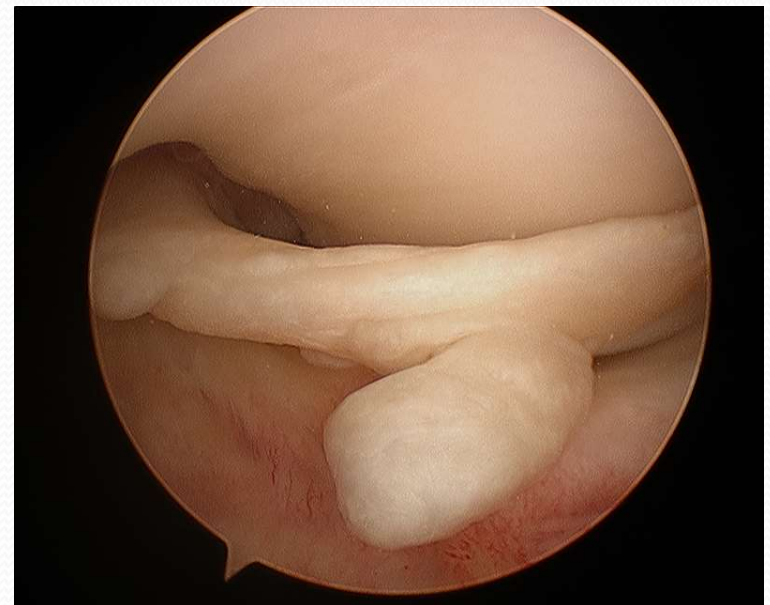
Meniscus Tears

- Surgery – Few are repairable
- Outcome often based on cartilage status
- Medial do better than lateral
 - Nearly 2x arthritis



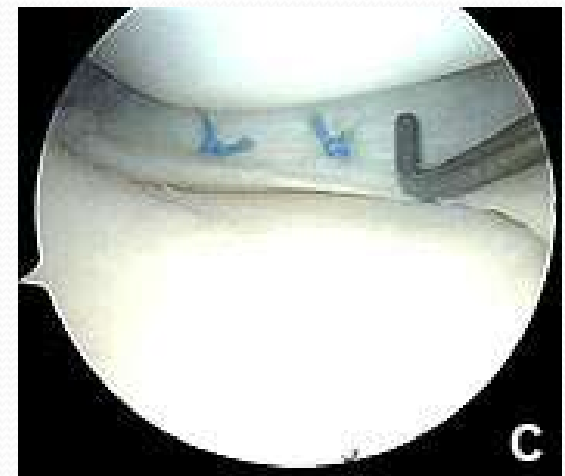
When to Operate???

- **Mechanical block to motion**
 - Bucket handle or displaced tears
- Repair
 - Peripheral and young
- Meniscectomy
 - Remove only what is torn



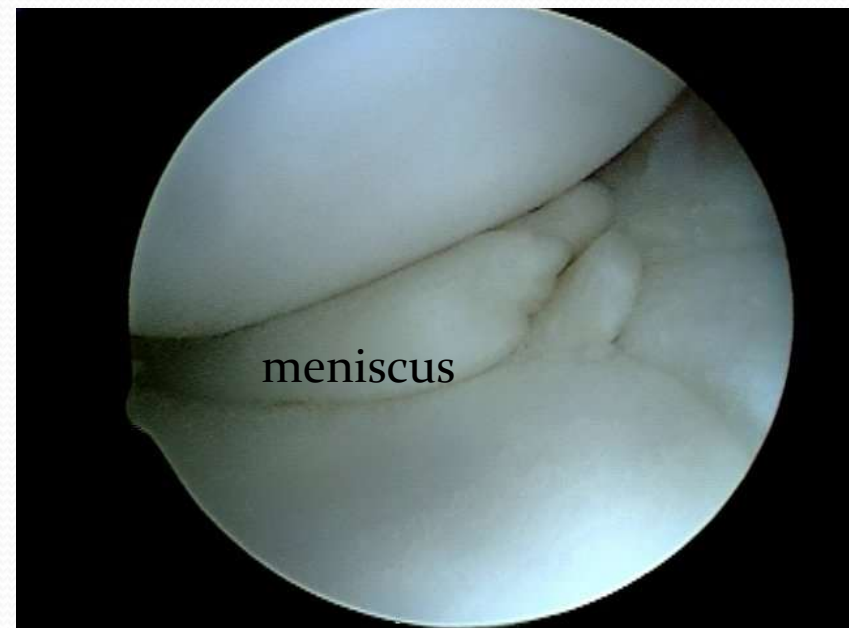
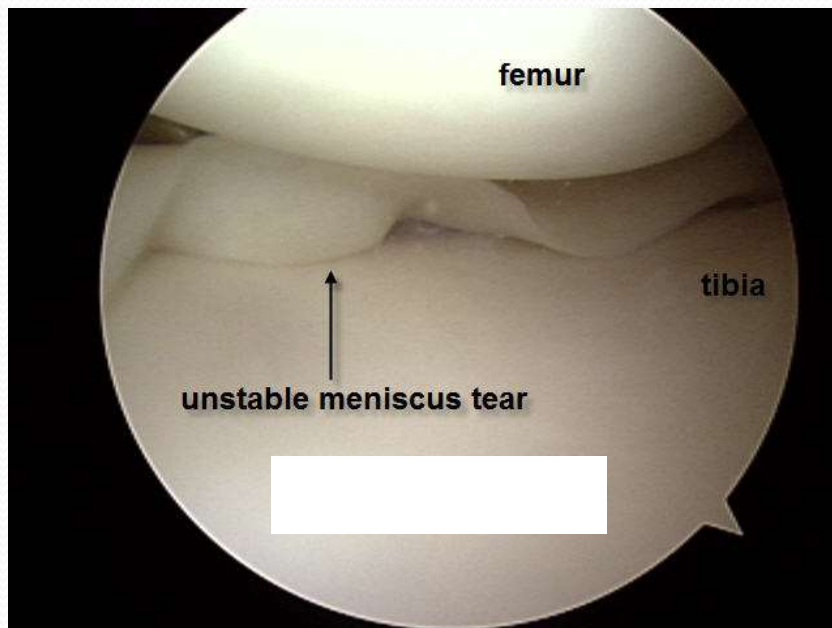
When to Operate???

- **Acute peripheral meniscus tears in young <40**
 - 75% chance to heal with repair
 - Worth trying to save meniscus
 - If have concomitant ACL tear better prognosis



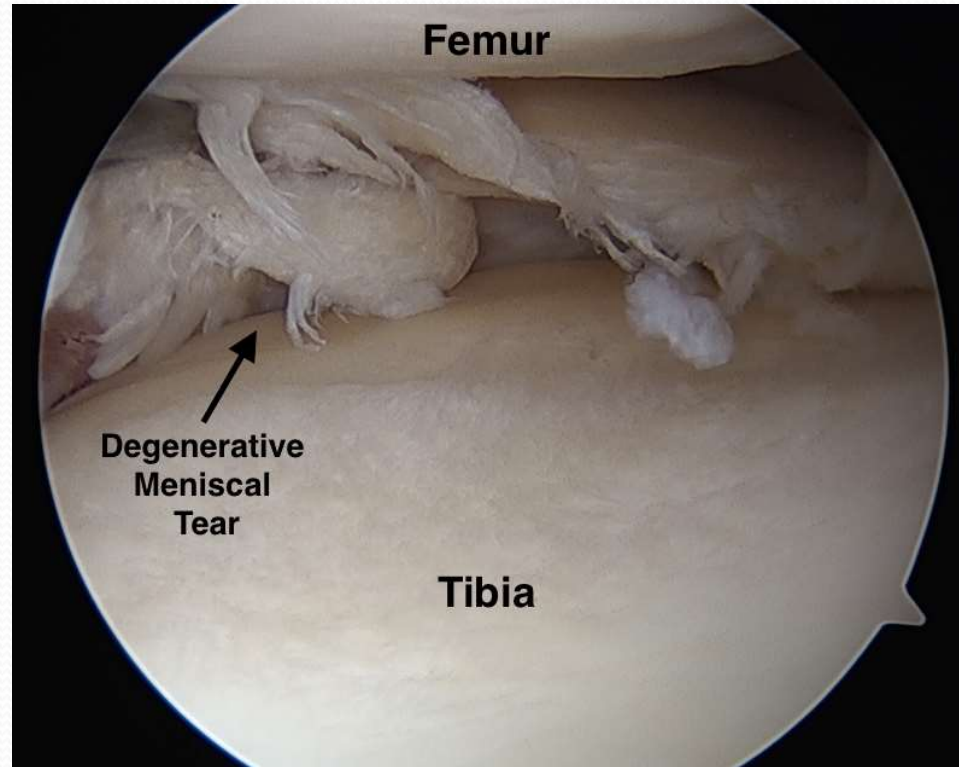
When to Operate???

- Mechanical symptoms and pain with little or no OA



When to Operate???

- Degenerative meniscus tear with failed nonop trt
 - Many will get better in a few week
 - Persistent effusion
 - Persistent pain



Meniscus Tears

- Rehabilitation and RTW
- Quadriceps is the foundation KEY!!!
- Needs PT to regain knee function
 - The more cartilage injury – longer recovery
 - Earliest recovery 2-4 weeks
 - Significant cartilage injury – 3+ months
 - In some cases was meniscus the pain source?
- Most can do modified duty in 2-3 weeks
 - BUT--Needs to be reasonable

Meniscus Tears

- Key Points

- Status of joint surface (OA) and quad key to RTW
- Get imaging done quickly and set in place plan to speed return to work
- Patients can take 4-6 months to fully recover but often can work full duty sooner than that
 - 6-8 weeks
- Poor results w/ high BMI
 - Other injuries
 - Poor attitude





Thank You!!!