Popliteus Anatomy

- Popliteus Superior attachment (origin): Lateral condyle of the femur, the lateral meniscus, fibular head

- Inferior attachment (insertion): Posterior aspect of the proximal tibia above the soleal line

- Nerve: Tibial nerve

- Segmental innervation: L4, L5, S1
Popliteal Fibular Attachment
Popliteus Biomechanics

- Action: Medial rotation of the tibia; lateral rotation of the femur, flexion of the knee joint

- Unlocks the knee with open or closed chain activities
  - External Rotation of Femur – Closed Chain
  - Internal Rotation of Tibia – Open Chain
Popliteus Examination and Findings

- **History:** Pain in anterior or posterior knee, pain with running, pain descending or ascending stairs

- **Palpation for Condition:** Swelling, possible warmth (if excess fluid)

- **AROM:** ↓ Knee Extension, Pain with knee flexion
Popliteus Examination and Findings Continued

- **PROM Classical:** ↓ Knee Extension, Pain at Endrange, Abnormal Muscle Endfeel

- **Muscle Length:** Decreased Length with or without pain, reproduction of symptoms
Popliteus Movement Analysis and Compensations

- Lack of full knee extension during gait or running analysis, patient report of pain anterior or posterior knee

- Pain posterior knee with squatting
Popliteus Interventions

Fluid

- Massage posterior and possibly anterior knee
- Joint Oscillations
Popliteus Interventions
Muscle Tightness

- Extend Knee
- Internally Rotate Tibia
- Add in Contract Relax
Popliteus Support

- Patient performs open chain knee extension
- Closed chain stepping back for terminal knee extension
Popliteus Recap

- We thought the problem was a tight popliteus because on the PROM Classical and MLT exams we felt tightness and re-created the symptoms. We treated with stretching (knee ext, tibial ir). The follow up supportive treatment would be active knee extension performed by the patient to maintain the length.
Popliteus Recap continued

- We thought the problem was fluid in the popliteal bursa because on the palpation for condition exam we felt fluid in the posterior aspect of the knee. We treated with massage and joint oscillation. The follow up supportive treatment would be active knee extension performed by the patient to help push out fluid.