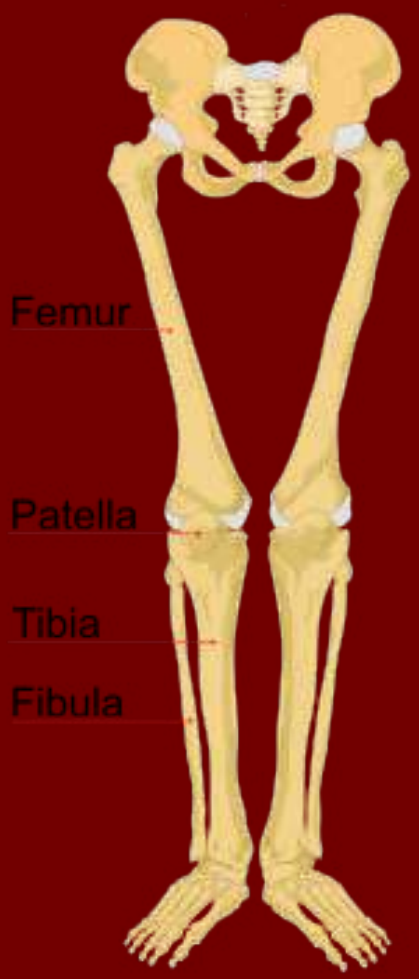
Knee and Thigh Anatomy

- Sports Medicine I

Knee Anatomy

- Largest joint in body
- Condyles articulate on femur and tibia
- Prevention is key:
  - Strengthen quads and hams

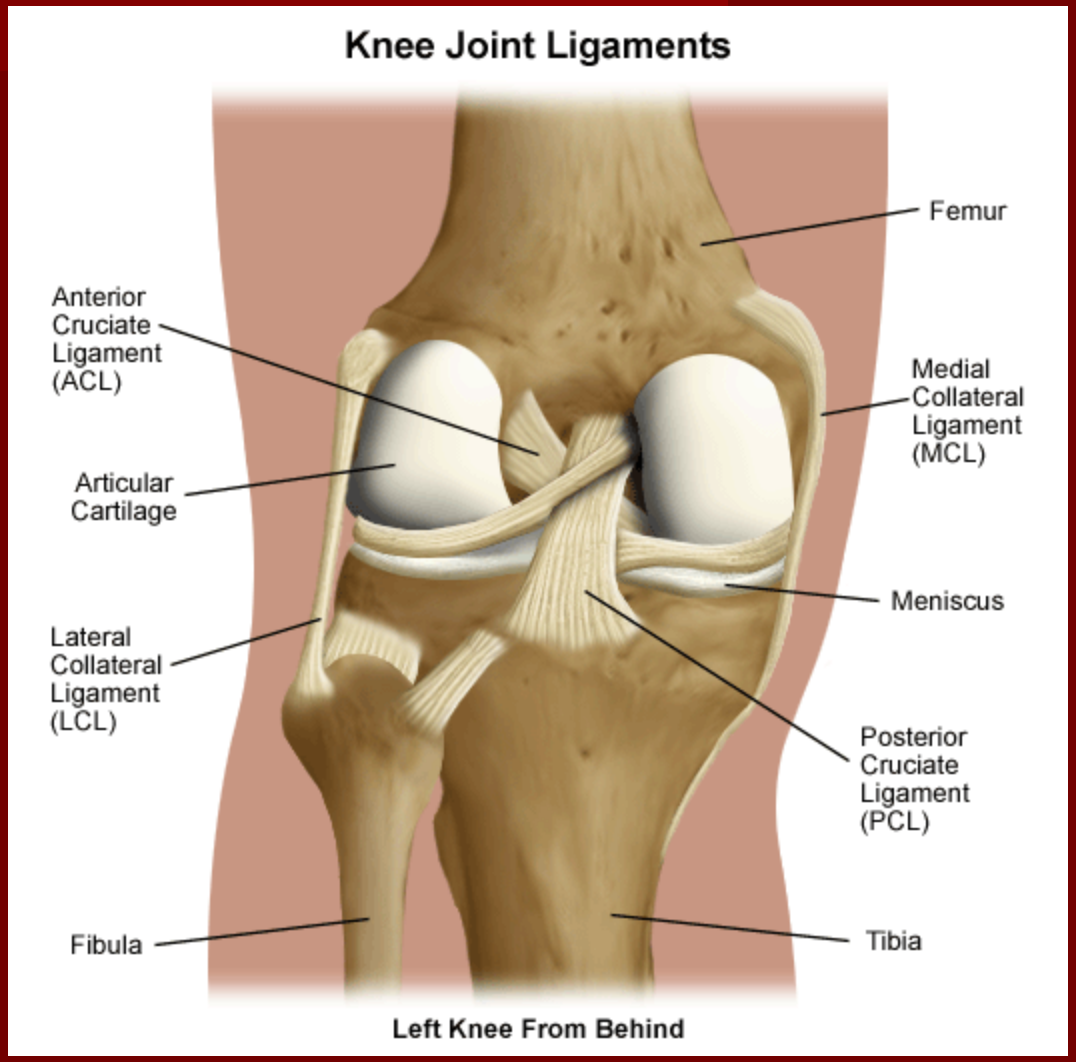


Knee Anatomy

- Bones
  - Femur
    - Longest and strongest bone in body
  - Tibia
    - Main weight-bearing bone
  - Fibula
    - Non-weight bearing
  - Patella
    - Knee-cap (largest sesamoid bone

Knee Anatomy

- Ligaments
  - Anterior Cruciate
  - Posterior Cruciate
  - Medial Collateral
  - Lateral Collateral



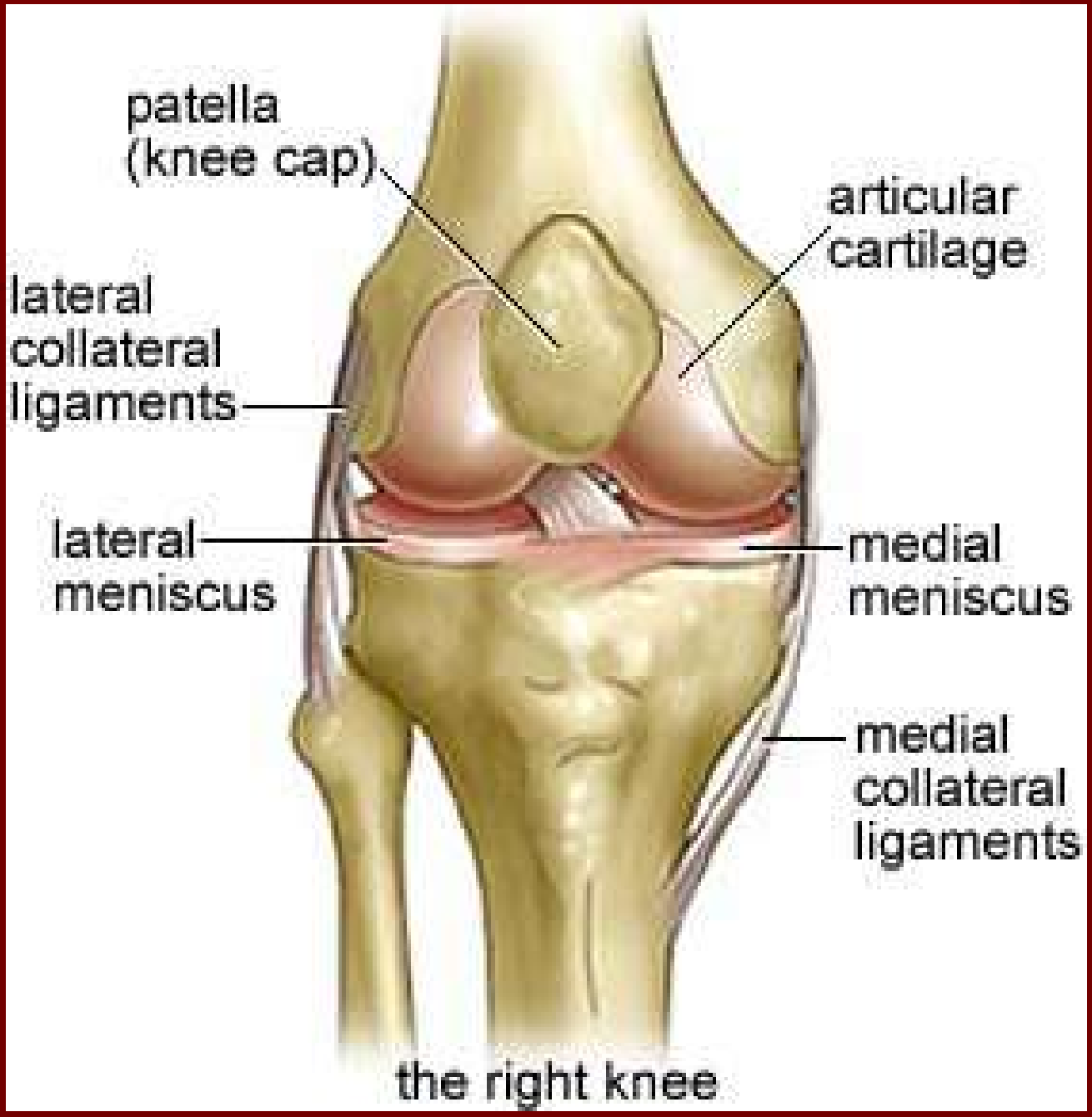
Cruciate Ligaments

- ACL
  - Prevents anterior translation of the femur on the tibia
- PCL
  - Prevents posterior translation of the femur on the tibia

Collateral Ligaments

- Medial Collateral
  - Secures femur to tibia
  - Connects to medial meniscus
  - Prevents valgus force
- Lateral Collateral
  - Cord-like ligament
  - Does not attach to meniscus
  - Prevents varus force

*Note: prevent abduction and adduction of tibia on femur

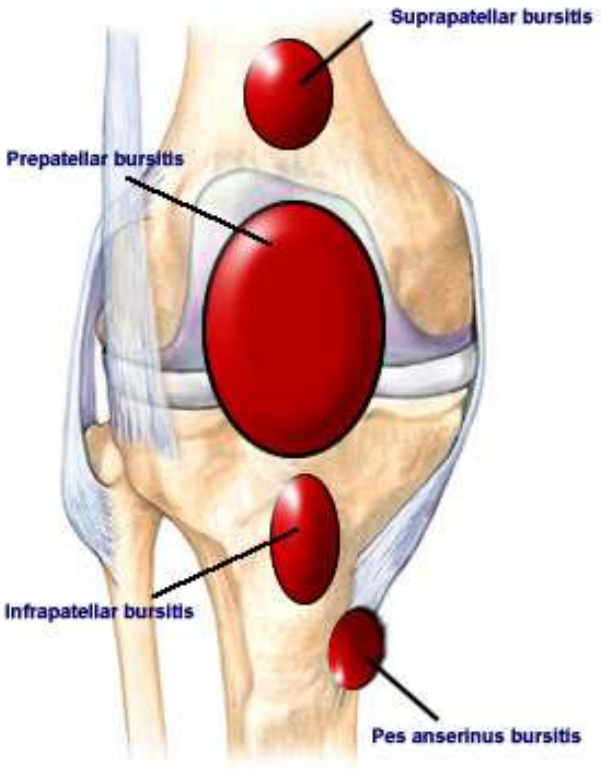

patella
(knee cap)
articular
cartilage
lateral
collateral
ligaments
lateral
meniscus
medial
meniscus
medial
collateral
ligaments
the right knee

Meniscus

- Fibrous cartilages
- Rest on top of tibia
- Cushioned base for the medial and lateral condyles of femur
- Functions
  - Shock-absorption
  - Adding to joint stability
  - Smooth gliding and rotating movements

Other Structures

- Bursa
  - fluid-filled sacs and serve as cushions against friction
- Synovial Membrane
  - Large, closed sac that lines inside of joint; lubricates tendons, ligaments, and bones
- Fat Pads
  - Specialized soft tissue structures for weight bearing and absorbing impact


Suprapatellar bursitis
Prepatellar bursitis
Infrapatellar bursitis
Pes anserinus bursitis