

Knee joint:

Type: condylar synovial joint:

- ↳ 2 condylar joint b/w condyle of femur & tibia
- ↳ a saddle joint b/w femur & patella

Articular surface: (condyle of femur
Patella

condyle of Tibia:

↳ Femoral condyl articulates with tibial condyle below

b/w of both patella & tibia:

Ligament:

1. Tibrous capsule { Ant
2. Ligamentum patellae { Ant
3. Tibial collateral or medial ligament { Medial
4. Fibular collateral or lateral ligament { Lat
5. Oblique popliteal lga { post
6. Cruciate popliteal lga { post
7. Anterior cruciate lga { Ant
8. Posterior cruciate lga { Post
9. Medial meniscus
10. Lateral meniscus
11. Transverse ligament

Fig 100

Tibrous capsule: Thin of ligament anteriorly

↳ Replace by quadriceps femoris of ligamentum patella

Femoral Attachment - Ant -> Delicant

Post -> Intercondylar line

Tibial Attachment -> Tibial tuberosity - Ant

Intercondylar ridge - Post

Ligamentum patellae -> Post surface of apex of patella & tibia

Below -> Tibial tuberosity

Fibular collateral ligament -> sup -> m.c. of femur

degenerated portion of Ant ligament

At ligament

Fibular collateral - sup - attachment lat epicondyle of femur

Inf - head of fibula

Oblique popliteal ligament - extension from meniscus

↳ Run lat with post surface of popliteal

Attach: Intercondylar line & lat part of femur

Anterior cruciate lig: External backward from head of fibula

to post. border intercondylar area of Tibia



Cruciate ligament: Ant. cruciate ligament - Ant. condylar axis of tibia to post. part of lat. condyle of femur.

Post. cruciate ligament - Post. condylar axis of tibia to post. part of lat. condyle of femur.

Meniscus: 70 cartilageous structure

Lat. meniscus: Med. meniscus:

Transverse lig: Connects ant. end of lat. & med. meniscus.

Blood supply:

Superior branch of PA

Ascending genicular branch of FA.

Descending branch of lat. circumflex artery.

2 lesser branches of Ant. Medial Ar.

Circumflex fibular branch -> post. fib. Ar.

Nerve supply:

Femoral nerve branch to vasti especially vastus med.

Sciatic nerve -> popliteal nerve: 40% FA.

Obturator nerve -> Post. division.

Arteries: 2-3% of femoral artery -> 10% of

Anterior part of knee joint.

3 arteries

Posterior part of knee -> Anterior part of popliteal artery.

2 Baki cysts

2 popliteal cysts

Locking of unlocking of knee joint

1st Condyle

Locking mechanism that allows the knee to remain in the position of full extension without muscular effort.

Unlocking knee -> Medial rotation of femur during last stage of extension.

2nd Diameter of lateral femoral condyle is less than Medial condyle.

As result -> lateral condyle full articular contact.

3rd Part of medial condyle remains uncontacted.

4th At this stage lateral condyle is in contact with medial rotation of femur.

5th As the remaining part of medial condyle is in contact with femur, it is also taken up.

Locking procedure by continuous action of extensor muscle of quadriceps femoris.

6th Unlocks is result of locking by lateral rotation of femur.

7th Muscle -> Popliteus muscle.