POPLITEAL FOSSA

https://rad.washington.edu/muscle-atlas/popliteus/
POPLITEAL FOSSA

- Semimembranosus muscle
- Adductor magnus muscle
- Linea aspera
- Adductor hiatus
- Semitendinosus muscle
- Biceps femoris muscle (short head)
- Femoral vein
- Sciatic nerve
- Femoral artery
- Biceps femoris muscle (long head)
- Popliteal fossa
- plantaris muscle
- Medial head of gastrocnemius muscle
- Lateral head of gastrocnemius muscle
- Popliteus muscle
- Small saphenous vein
- Posterior cutaneous nerve in thigh
- Tibial nerve
- Popliteal vein
- Popliteal artery
- Common permeal nerve
- Small saphenous vein
BOUNDARIES

- **Superolaterally**: Biceps femoris

- **Superomedially**: Semimembranosus, lateral to which is the semitendinosus

- **Inferolaterally** and **inferomedially**: Lateral and medial heads of the gastrocnemius.

- **Posteriorly (roof)**: Skin and popliteal fascia

- **The anterior wall or floor**: Popliteal surface of the femur and the popliteus muscle.
Boundaries of Popliteal Fossa
ROOF

- Skin,
- Superficial fascia,
- Popliteal fascia, pierced by:
  - Short Saphenous vein,
  - Post cutaneous nerve of thigh

**Superficial contains:**
- Short saphenous vein
- Post cut nerve of thigh
- Post div of medial cut nv of thigh
- Sural communicating nv
Structures in roof of Popliteal Fossa

- Outline of popliteal fossa
- Posterior division of medial cutaneous nerve of thigh
- Posterior cutaneous nerve of thigh
- Posterior cutaneous nerve of thigh
- Branches from posterior cutaneous nerve of thigh
- Lateral cutaneous nerve of calf
- Peroneal communicating nerve
- Small saphenous vein

Structures on the roof of popliteal fossa
RIGHT POPLITEAL FOSSA
DEEP DISSECTION

CONTENTS
- Popliteal artery & vein
- Tibial nerve
- Common fibular nerve
- Fat
- Lymph nodes

NOTE ON POPLITEAL ARTERY
- 8" long
- Starts medial to tibial nerve
- Ends lateral to tibial nerve
- Vein always between two

RIGHT POPLITEAL FOSSA
SUPERFICIAL DISSECTION

- Diamond shaped
- Borders:
  - Upper medial - Semimembranosus (& semitendinosus)
  - Upper lateral - Biceps femoris
  - Lower medial - Gastronemius (medial head)
  - Lower lateral - Plantaris & gastrocnemius (lateral head)
  - Floor - Popliteus, capsule, femur
  - Roof - Short saphenous & communicating veins
    - Lateral sural cutaneous nerve
    - Sural communicating nerve
    - End of posterior femoral cutaneous nerve
    - Fascia lata

MEDIAL LATERAL

Superior medial & lateral genicular arteries
Gastrocnemius
Semimembranosus

ARteries
1. Anterior tibial
2. Fibular
3. Posterior tibial
Soleus
Flexor digitorum longus

Plantaris
Tibialis posterior

Biceps femoris
Sartorius
Gracilis
Semitendinosus
Semimembranosus

Nerve to popliteus
Lateral sural nerve
Sural communicating nerve
Sural nerve

MEDIAL LATERAL
Floor

From above down is formed by:

1. Popliteal surface of the femur
2. Capsule of the knee joint
3. Oblique popliteal ligament
4. Popliteus muscle covering the upper posterior surface of the tibia.
Popliteal fossa: floor

- HIATUS MAGNUS
- POPLITEAL ARTERY
- POPLITEAL PAD OF FAT
- POPLITEAL LYMPH NODES
- CAPSULE OF KNEE JOINT
- POPLITEAL FASCIA
- POPLITHEUS MUSCLE

Tendon of semimembranosus
(Note that an extension from the tendon forms the fascia over the popliteus)

Fat covering popliteal surface of femur

Knee joint → Capsule of knee joint

Popliteus and fascia over it
Popliteus Muscle

- **Origin** inferior, popliteal surface of tibia, above the soleal line, fascia of semimembranosus
- Deep to arcuate popliteal ligament
- Enters capsule
- Crosses lateral surface of lateral meniscus
- Attached by popliteal-meniscal fibres which bound hiatus
- Enters hiatus
- Crosses femoral condyle
- Deep to lateral collateral ligament
- **Inserts** into anterior part of groove
- Superior popliteal recess communicates joint
Origin of the popl. muscle

- The popliteus muscle has three origins, the strongest of which is from the lateral femoral condyle. Other important origins are from the fibula (popliteofibular ligament) and from the posterior horn of the lateral meniscus. The femoral and fibular origins form the arms of an oblique Y-shaped ligament, the arcuate. The arms are joined together by the capsule and meniscal origin.
POPLITEAL FOSSA

- Termination of Short Saphenous Vein

Contents:
- Popliteal vessels
- Tibial nerve
- Comn peroneal nerve
- Popliteal Lymph nodes
- Fat
- Genicular Branch of Post. Divn. of Obturator nerve
- Post cutaneous nerve of the thigh (before it becomes cutaneous)
- Sural communicating nerve
C Posterior view
Contents of Popliteal Fossa

- Tibial nerve
- Popliteal vein
- Popliteal artery
- Medial condyle of femur
- Lateral condyle of femur
- Common peroneal nerve
- Popliteal artery
- Popliteal vein
Blood Vessels in the Popliteal Fossa

- **Popliteal artery:**
  - Continuation of the femoral artery, begins when the latter passes through the adductor hiatus.
  - The popliteal artery is the deepest of the neurovascular structures in the popliteal fossa and is therefore difficult to palpate; however, a pulse can usually be detected by deep palpation medial to the midline.
  - The popliteal artery passes inferolaterally through the fossa and ends at the inferior border of the popliteus by dividing into the anterior and posterior tibial arteries.
POPLITEAL FOSSA:

Contents

Popliteal Artery:

- From Adductor Hiatus to Lower Border of Popliteus
- Passes Dwn & lat along the floor
- Div into Ant & post tibial arteries
Popliteal Artery - Contd

Branches:
1. Cutaneous: Skin of back of leg

2. Muscular:

3. Articular: Five Genicular arteries
   - Sup & Inf Med, Sup & Inf Lat, Middle
Anastomosis around Knee
   • Desc Br of Lat Cx Femoral, (SL)
   • Desc genicular br of femoral (SM)
   • Sup medial genicular & Saphenous br of desc genicular art (IM)
   • Rec brs of Ant tibial, Cx Fibular br of Post tibial (IL)
Branches of Popliteal Artery
POPLITEAL FOSSA : Contents

Popliteal Nodes :

• 6 in no

• **Afferents** : Superficial lymphatics acc SS Vein,
  (Postero lateral aspect of leg & foot)

• From Knee joint

• Deep lymphatics acc Tibial vessels.

• **Efferents** : Acc Femoral vessels to Deep Inguinal
  nodes
Baker’s cyst
Proximal Tibiofibular Joint
Articulation is between the lateral condyle of the tibia and the head of the fibula. The articular surfaces are flattened and covered by hyaline cartilage. This is a synovial, plane, gliding joint.

Ligaments
Anterior and posterior ligaments strengthen the capsule. The interosseous membrane
Capsule and Synovial Membrane attached to the line of the articular surface.
The common peroneal nerve supplies the joint.

Movements
A small amount of gliding movement takes place during movements at the ankle joint.
Distal Tibiofibular Joint

Articulation
Articulation is between the fibular notch at the lower end of the tibia and the lower end of the fibula.

Type
The distal tibiofibular joint is a fibrous joint.

Capsule
There is no capsule