

Popliteal fossa, veins of the lower limb & nerve injuries of the lower limb





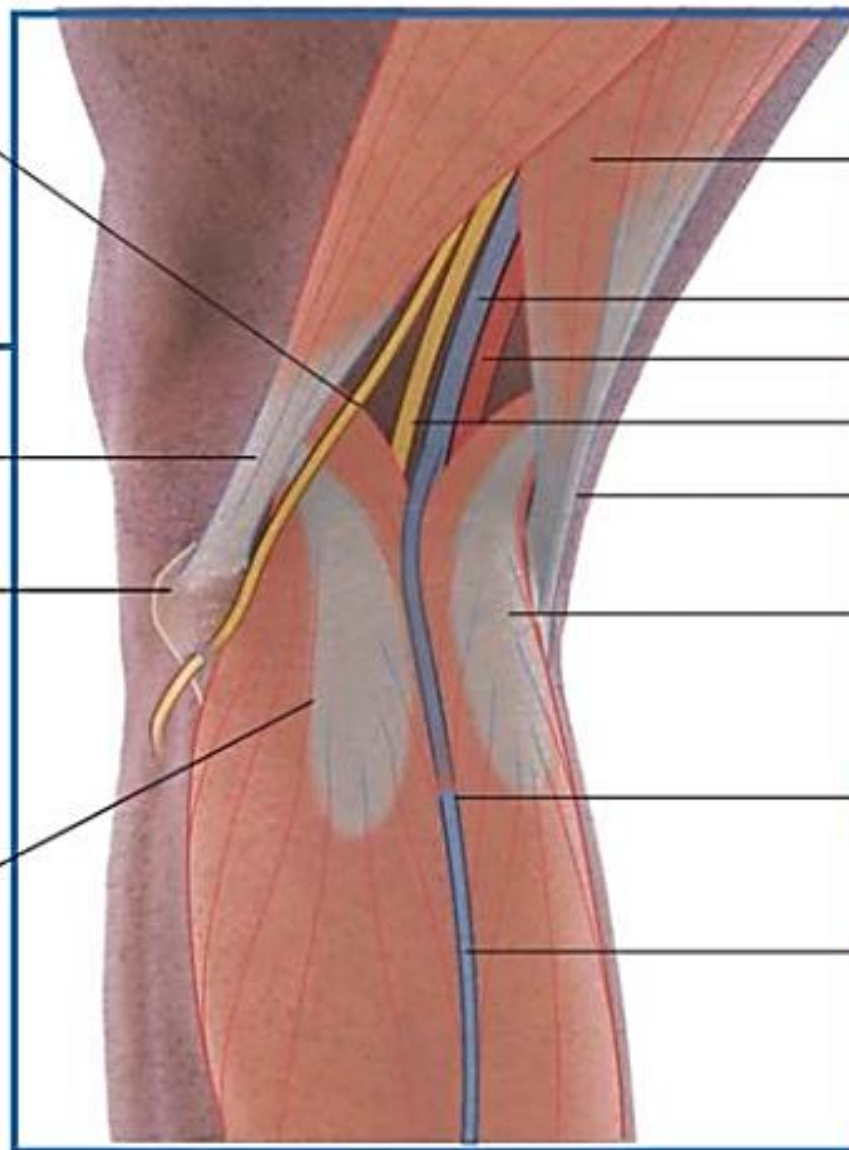
Common fibular nerve

Popliteal fossa

Biceps femoris muscle
and tendon

Head of fibula

Lateral head of
gastrocnemius muscle



Semimembranosus
muscle

Popliteal vein

Popliteal artery

Tibial nerve

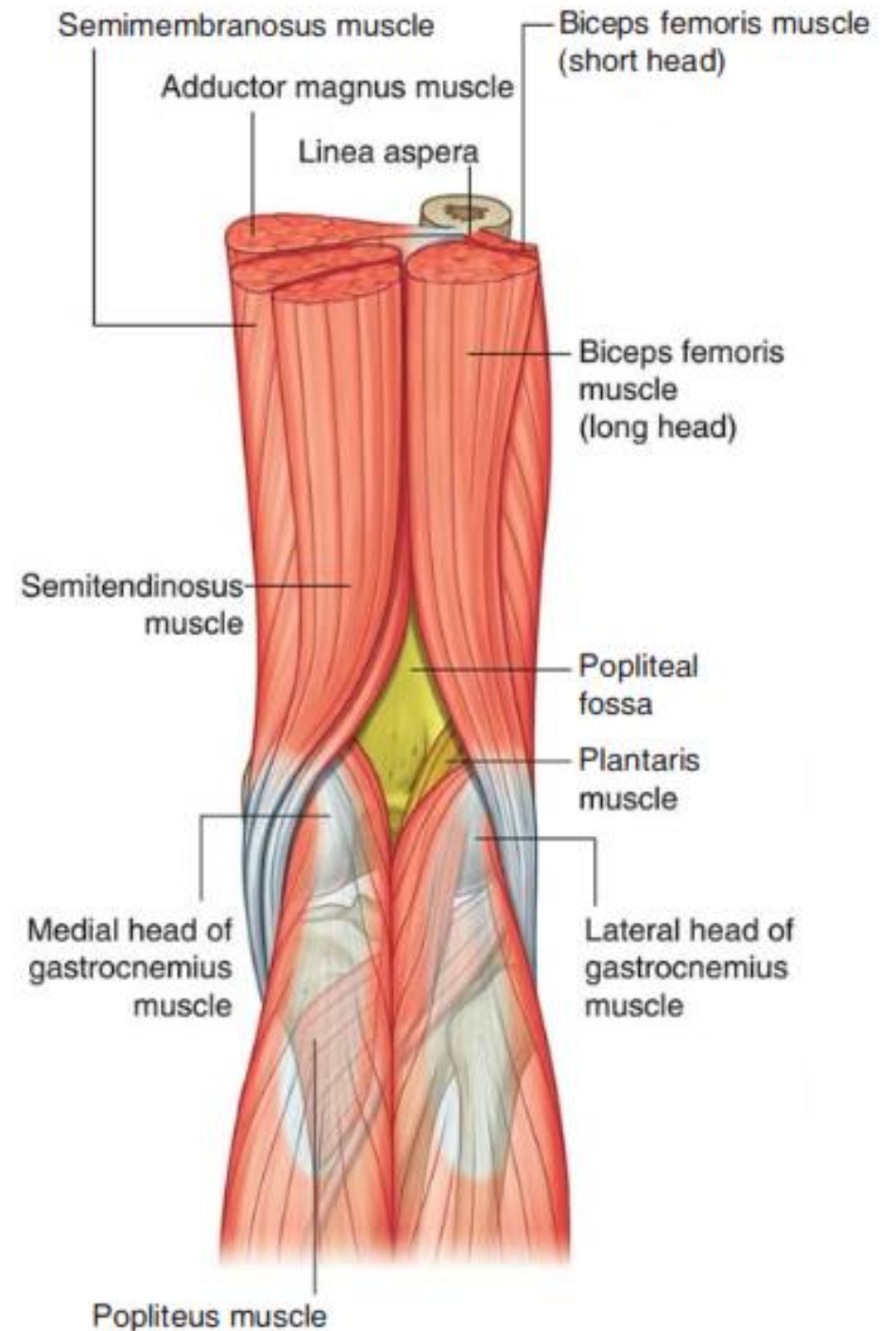
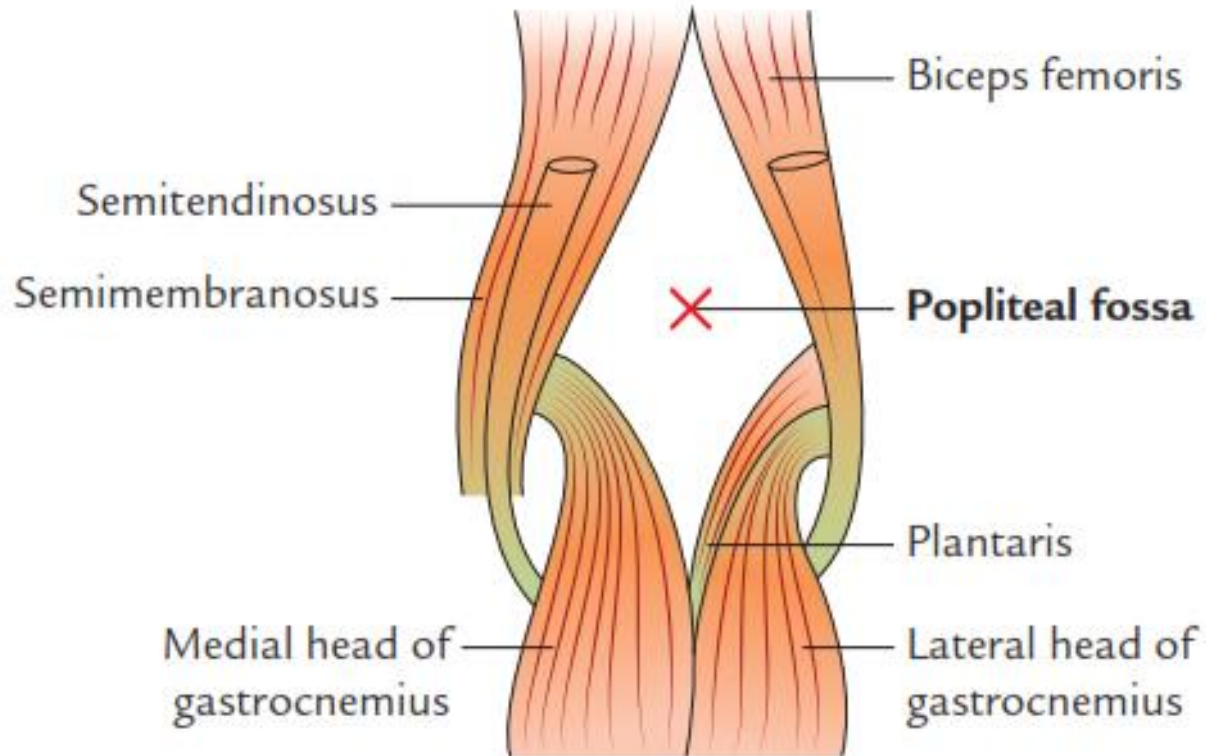
Semitendinosus tendon

Medial head of
gastrocnemius muscle

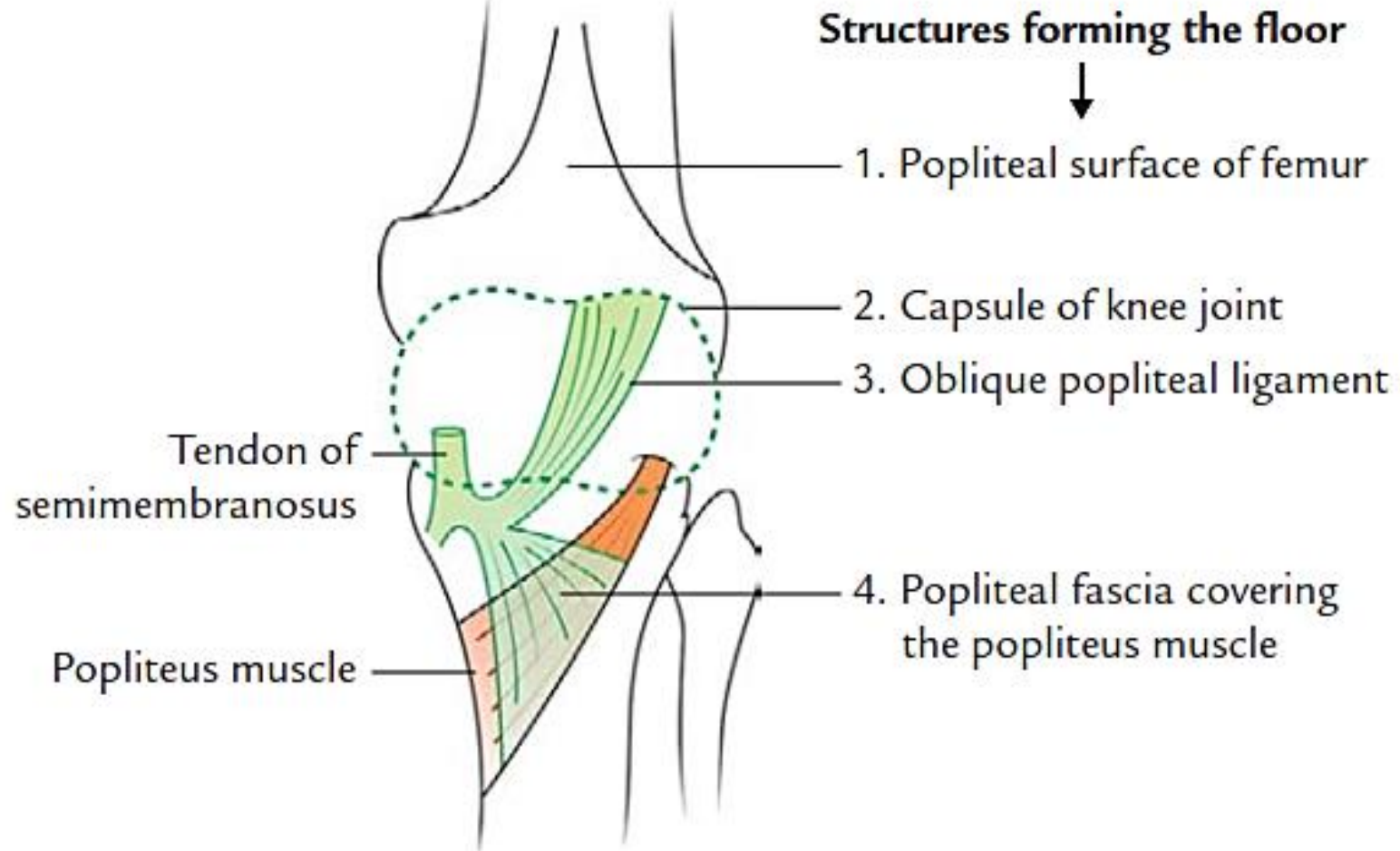
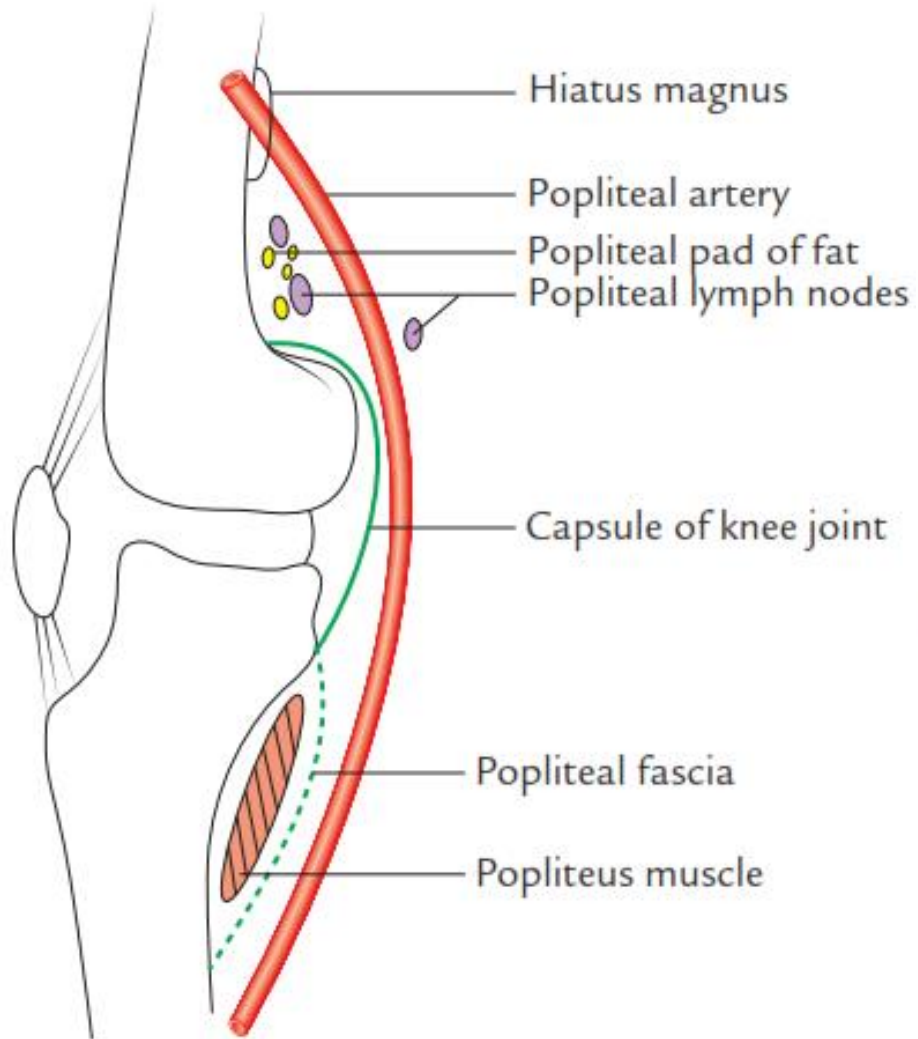
Penetrates deep fascia

Small saphenous vein

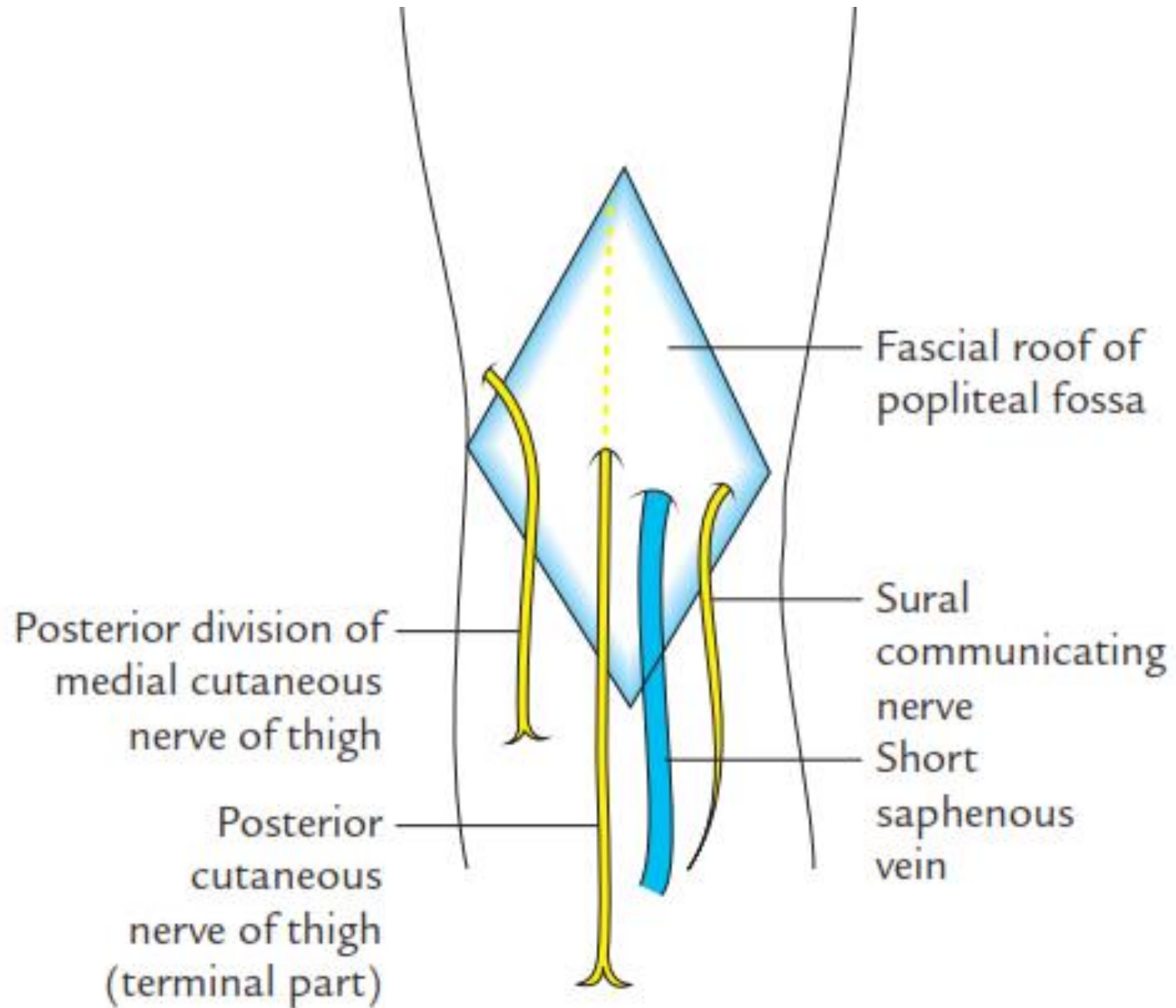
Boundaries



Floor

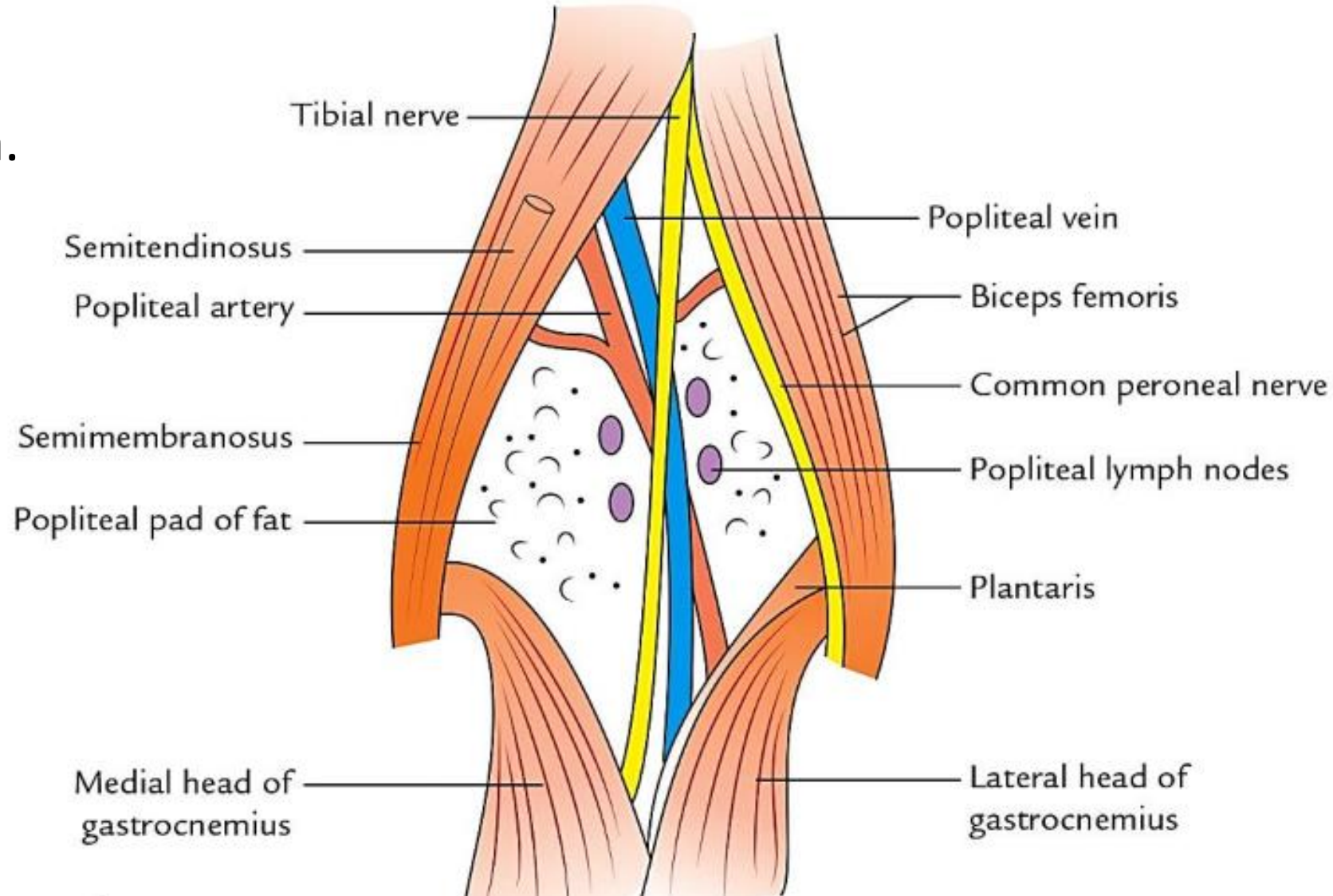


Roof

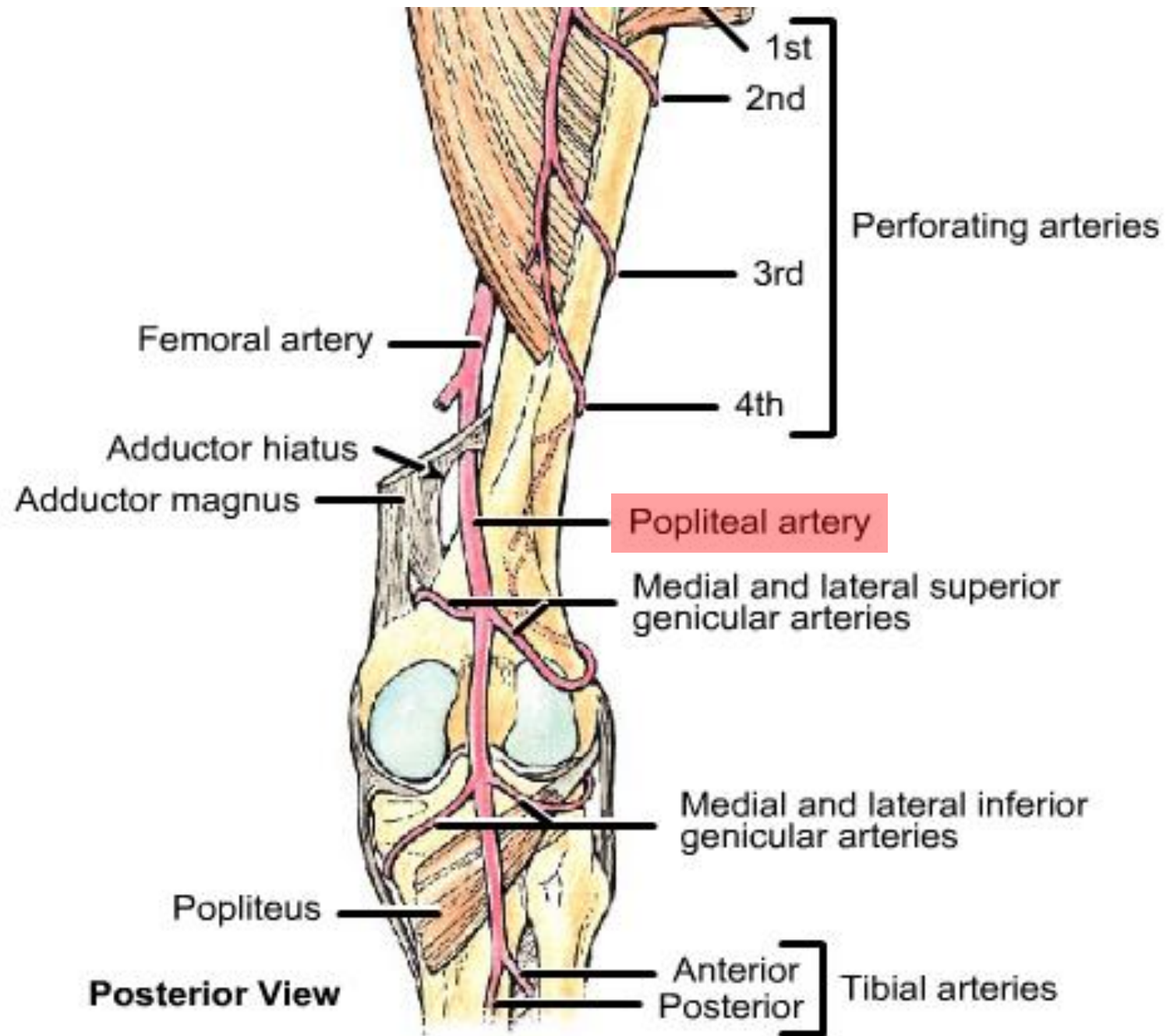
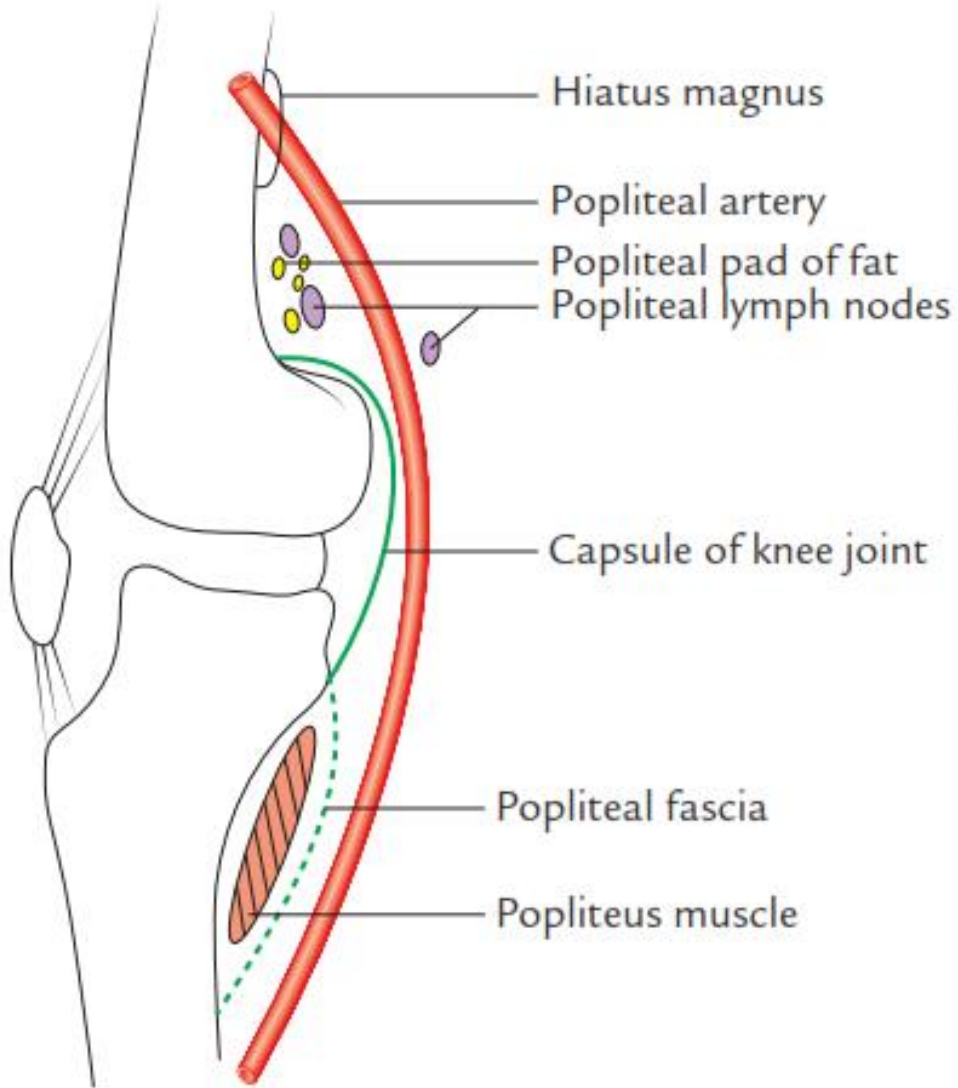


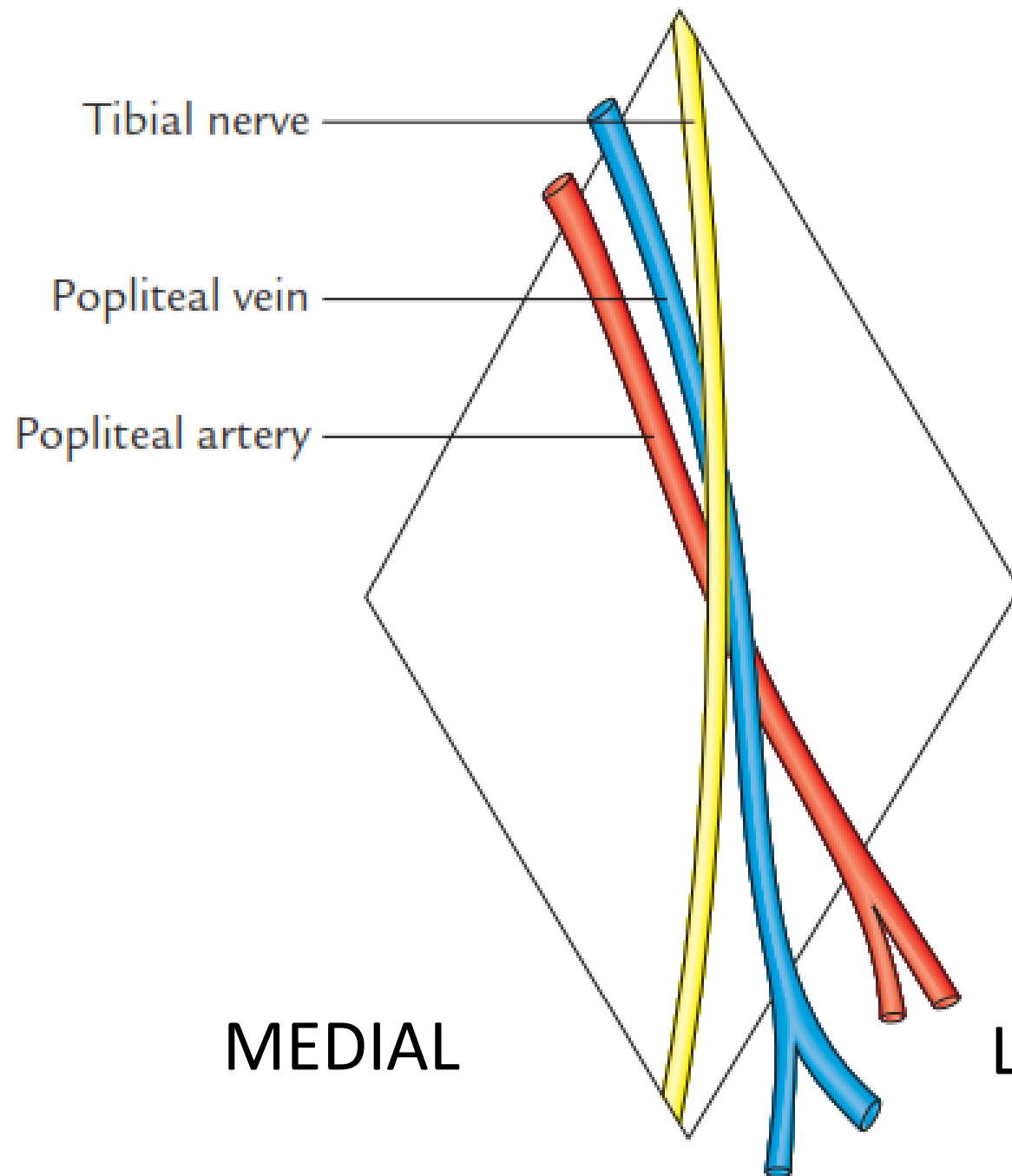
Contents of the popliteal fossa

1. Terminal brs. of sciatic n.
3. Popliteal artery
4. Popliteal vein.
5. Popliteal lymph nodes.
6. Popliteal pad of fat.
7. PCNT
8. Genicular branch of the obturator nerve

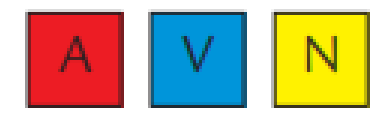


Popliteal artery





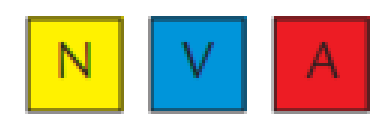
In the upper part
(from medial to lateral)



In the middle part
(from superior to deep)

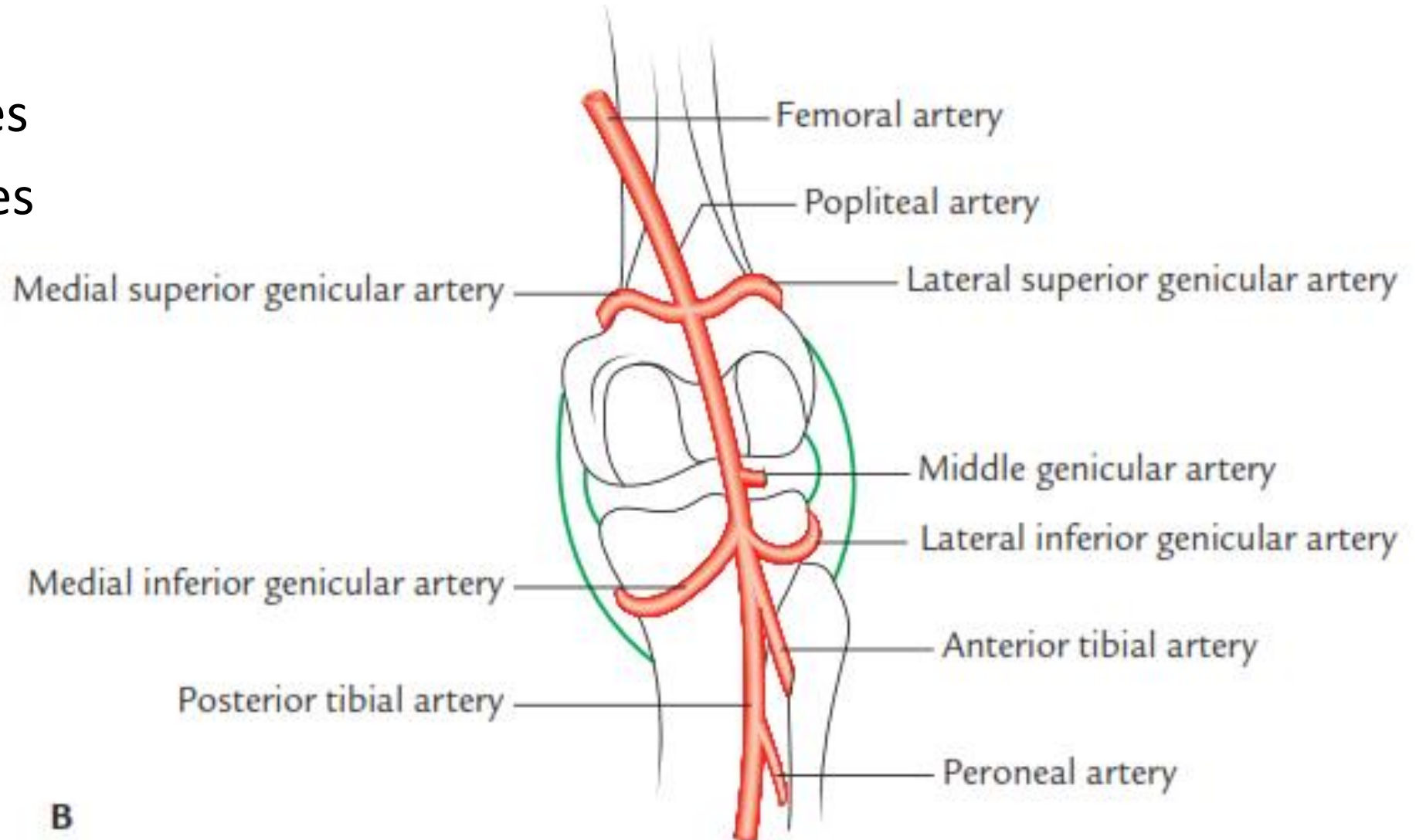


In the lower part
(from medial to lateral)

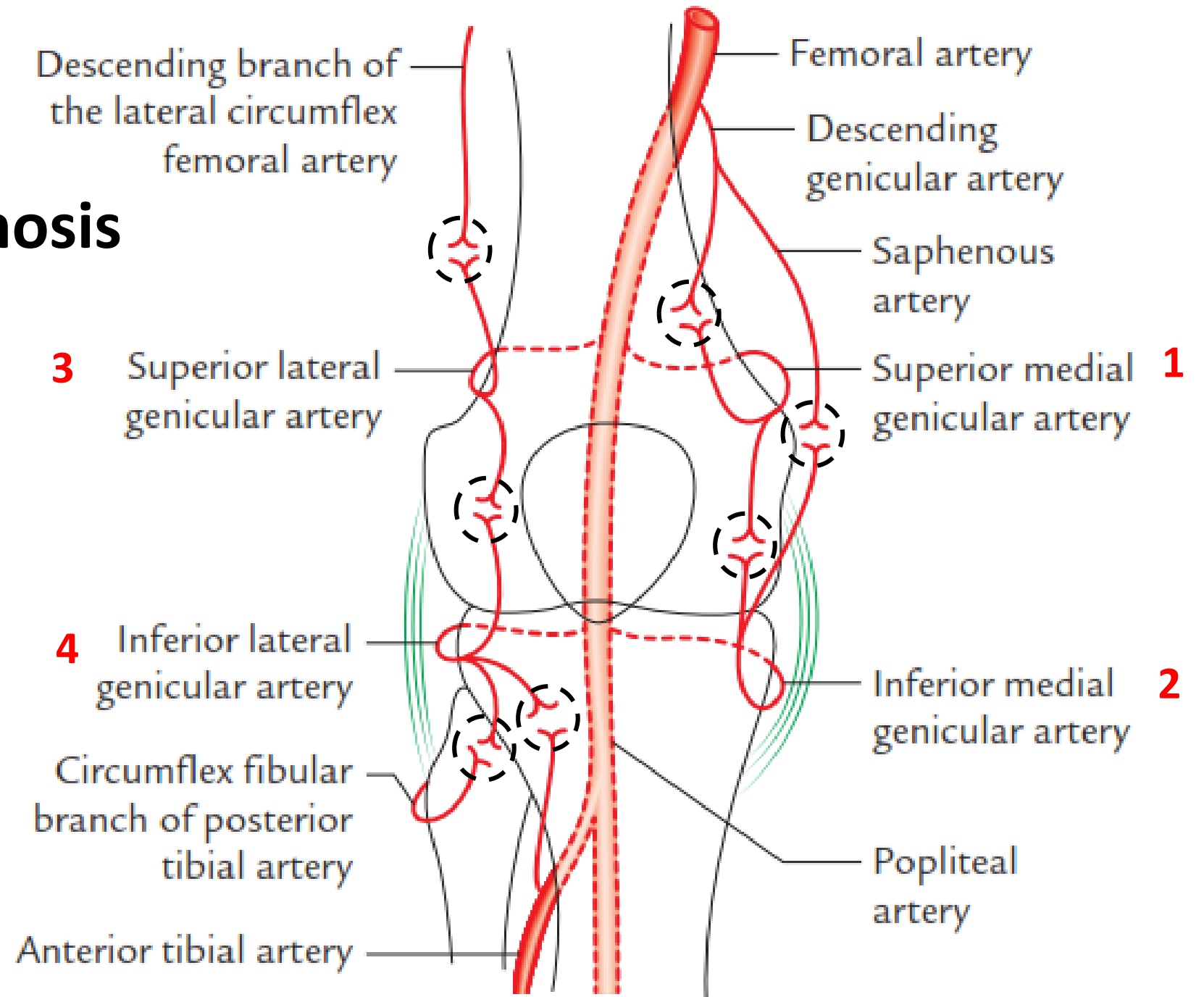


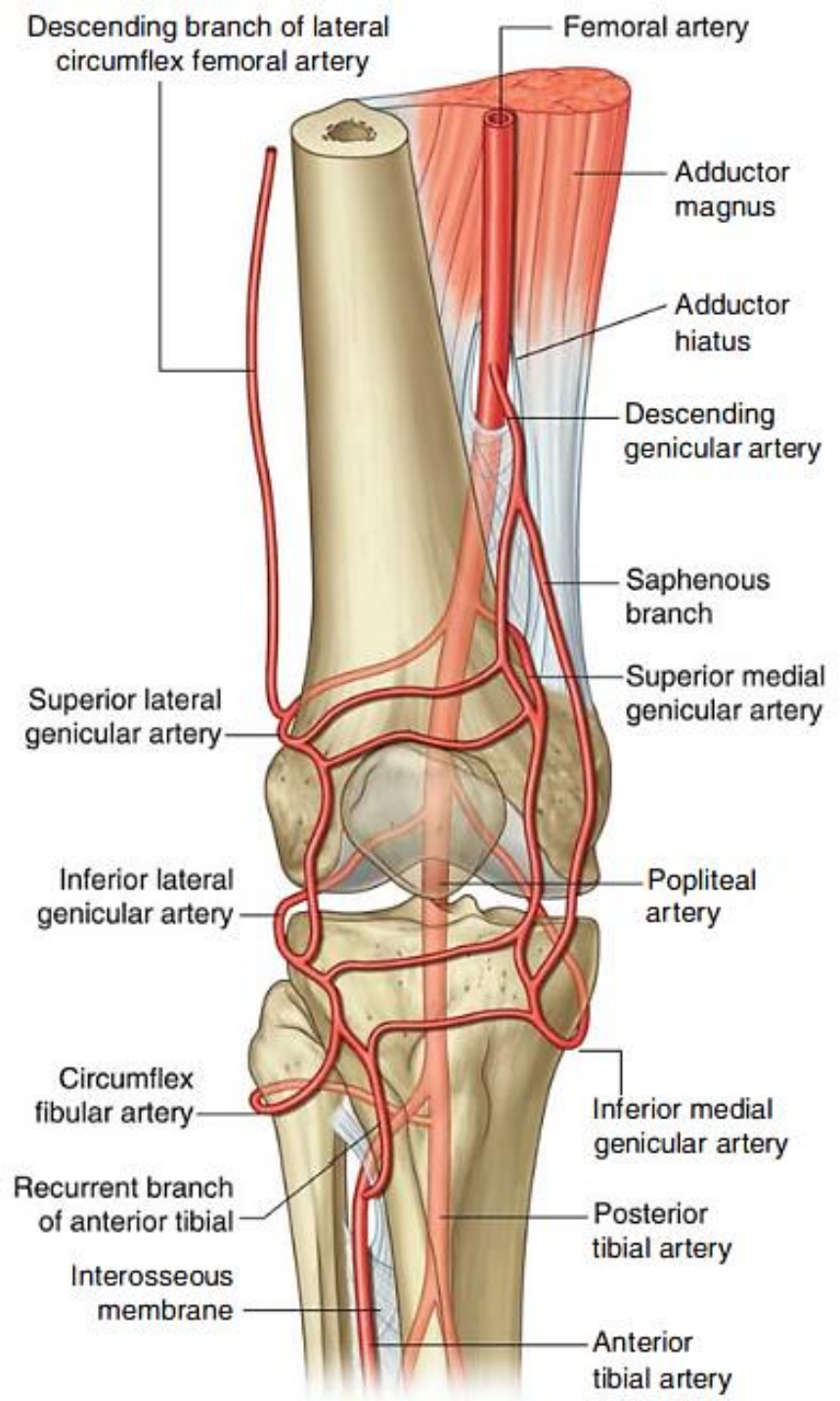
Popliteal artery

- Muscular branches
- Genicular branches



Genicular anastomosis

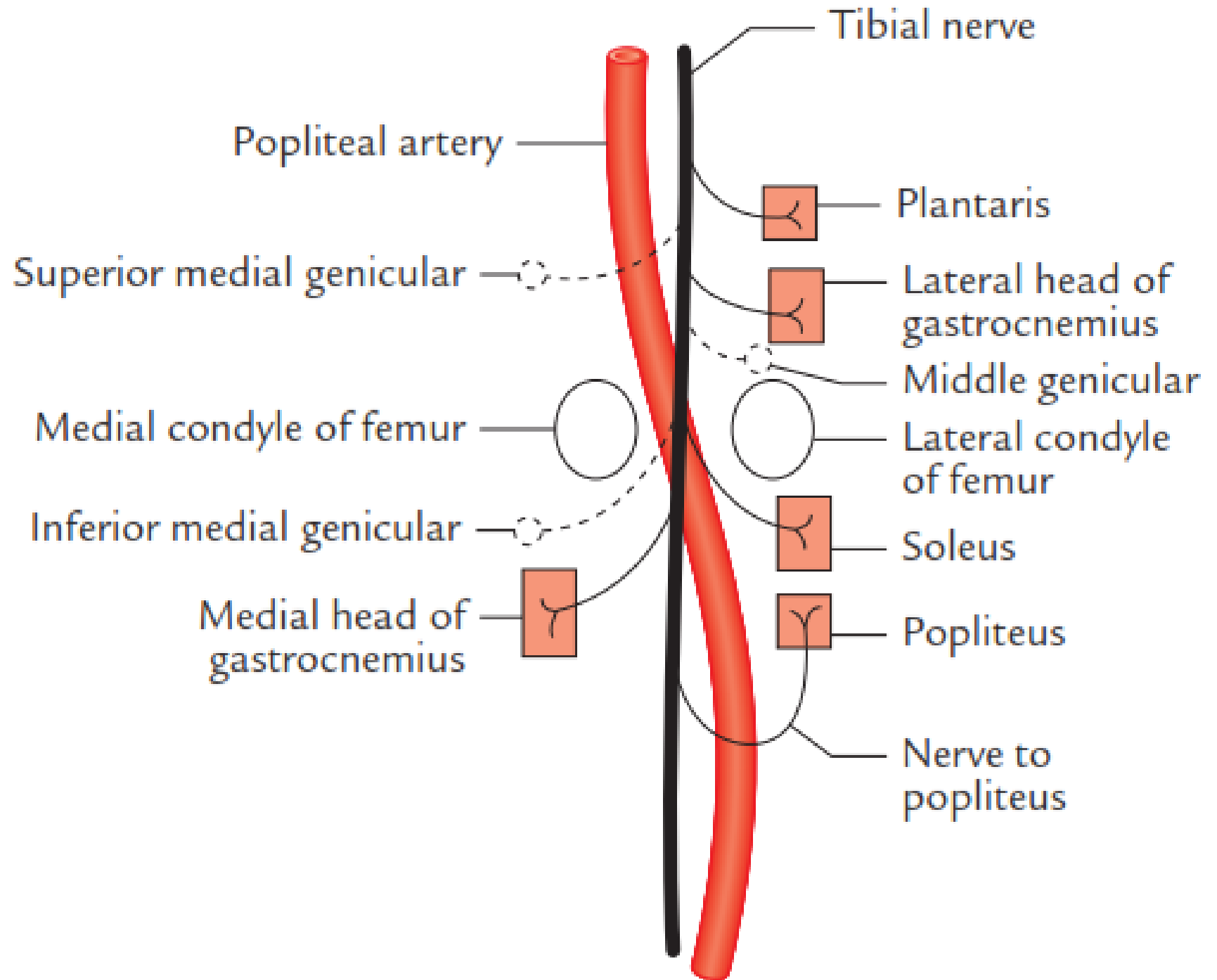




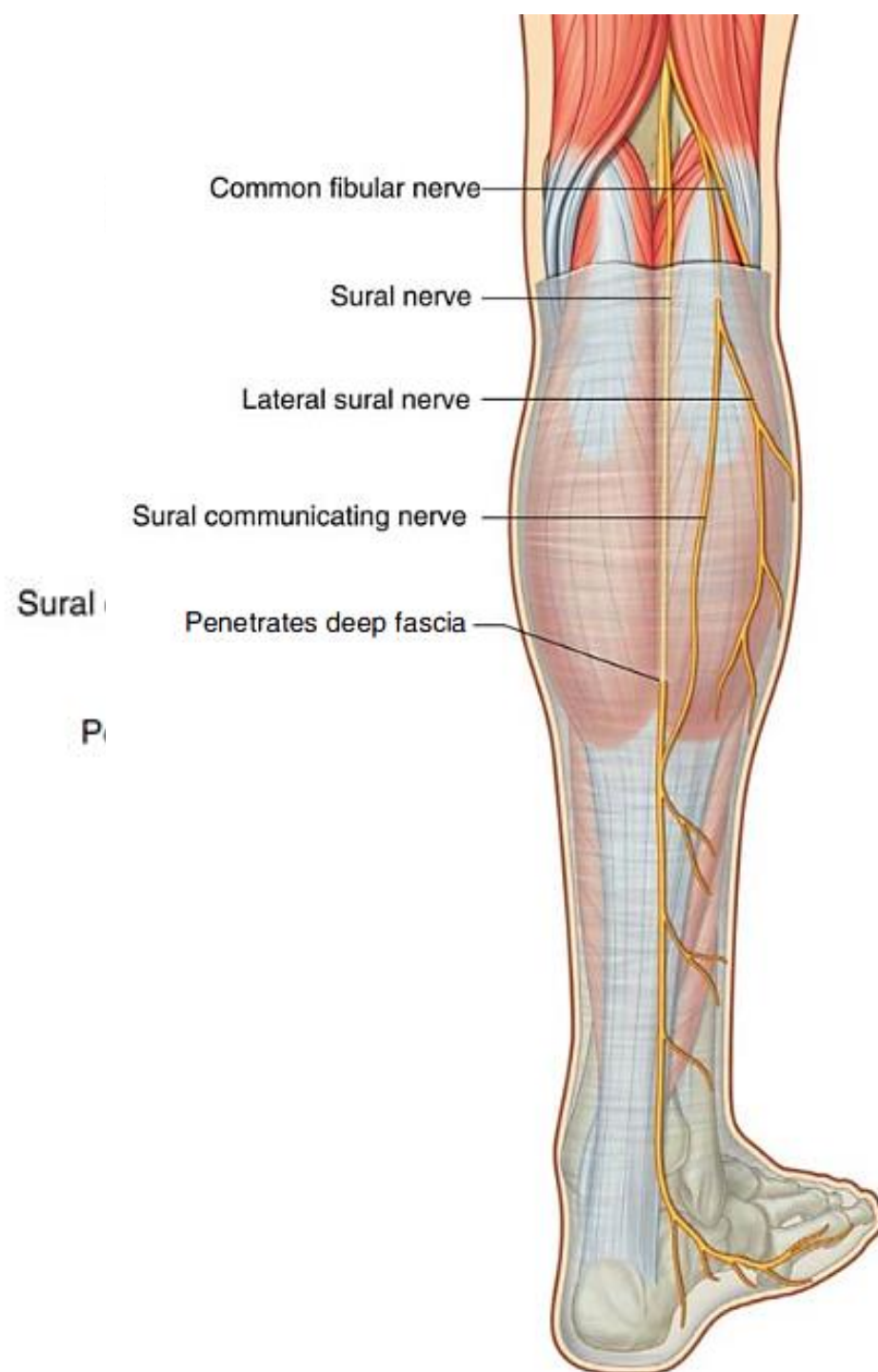
Popliteal artery

Tibial nerve

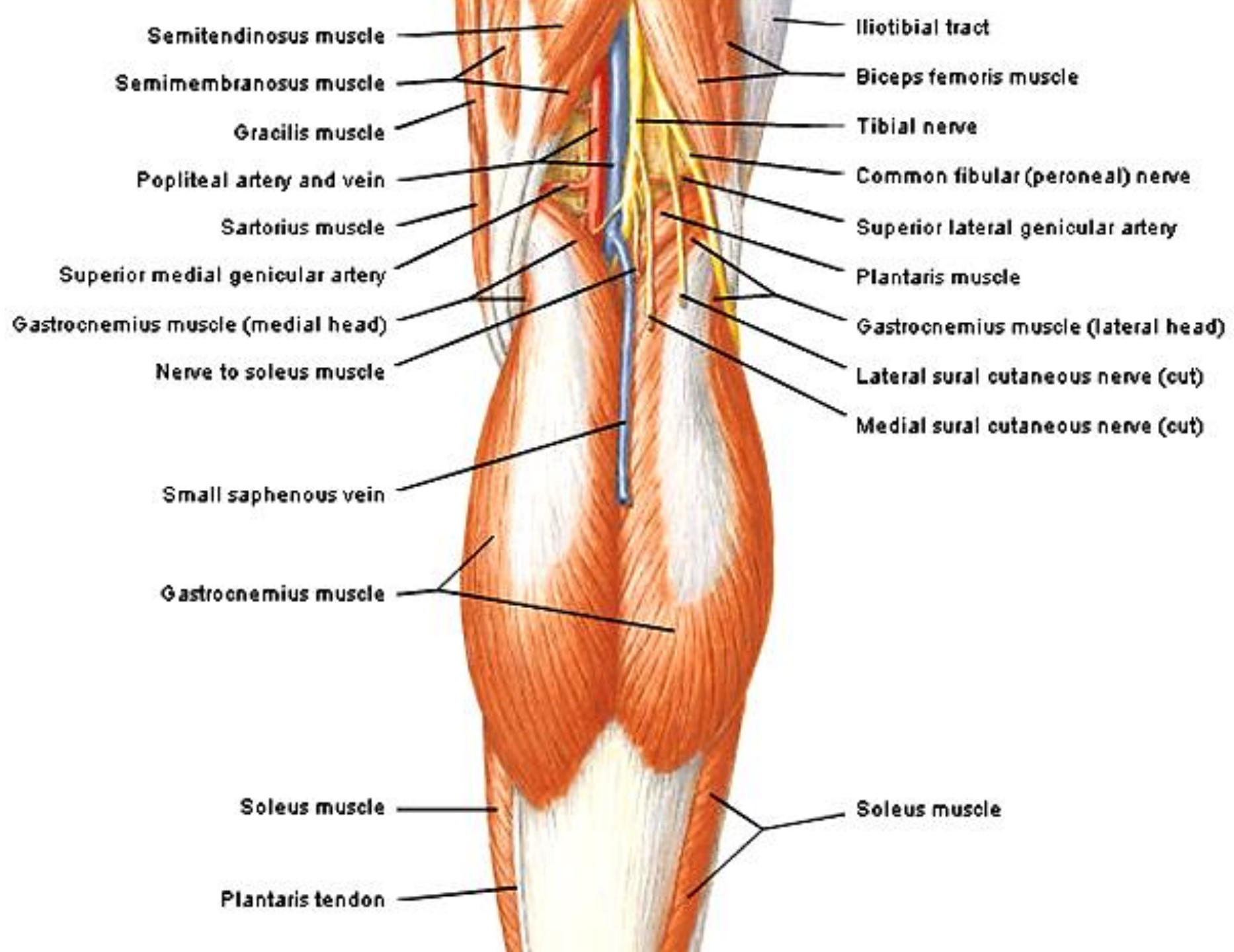
- Muscular brs.
- Genicular brs.



Sural nerve



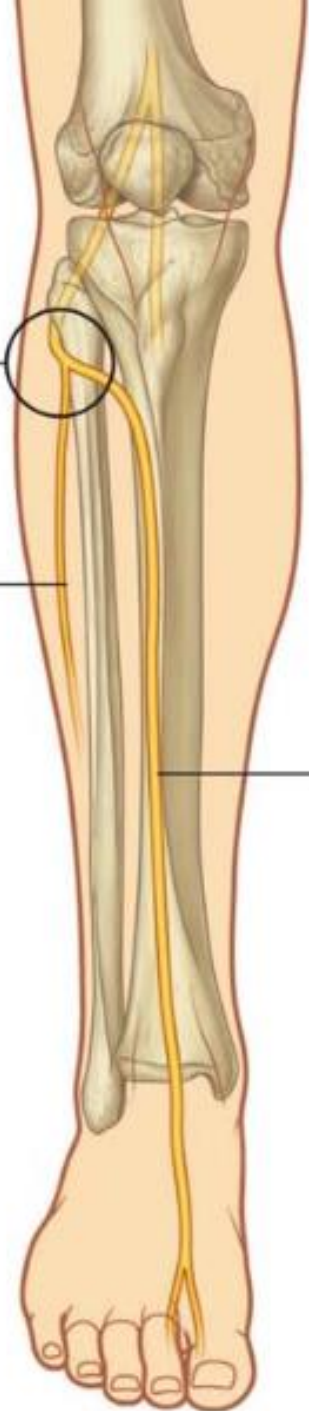
The common peroneal nerve



Common fibular
nerve (neck of fibula)

Superficial branch

Deep branch



Right Popliteal Fossa

Popliteal artery

Semimembranosus

Popliteal vein

Tibial nerve

Small saphenous vein

Gastrocnemius
(*medial head*)

Sural nerve

Common peroneal
nerve

Lateral cutaneous
nerve of the calf

Peroneal communicating
nerve

MEDIAL

LATERAL





Clinical correlation

Palpation of the popliteal artery pulse

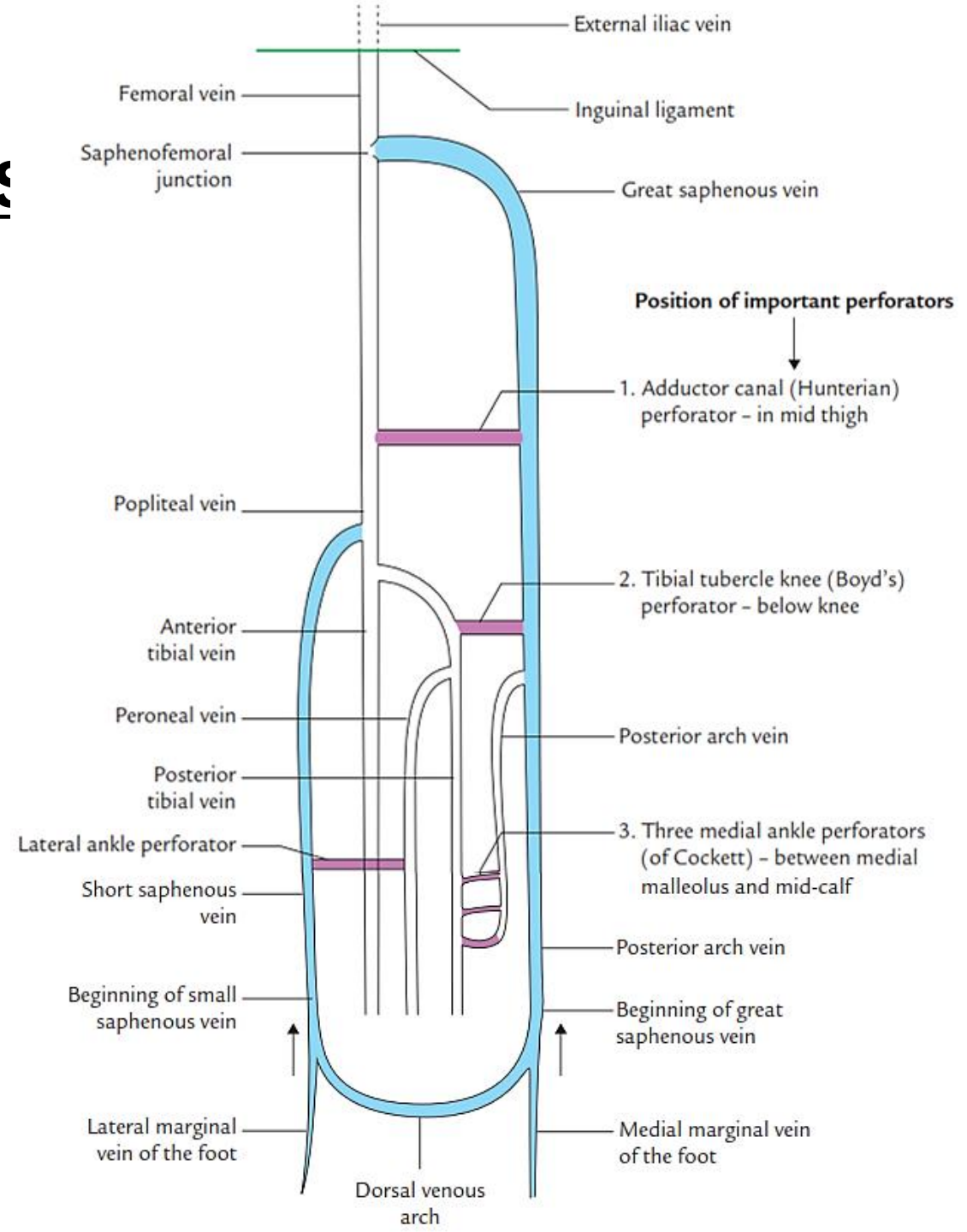


Veins of the lower limb



Classification of veins

- Superficial veins
- Perforating veins
- Deep veins

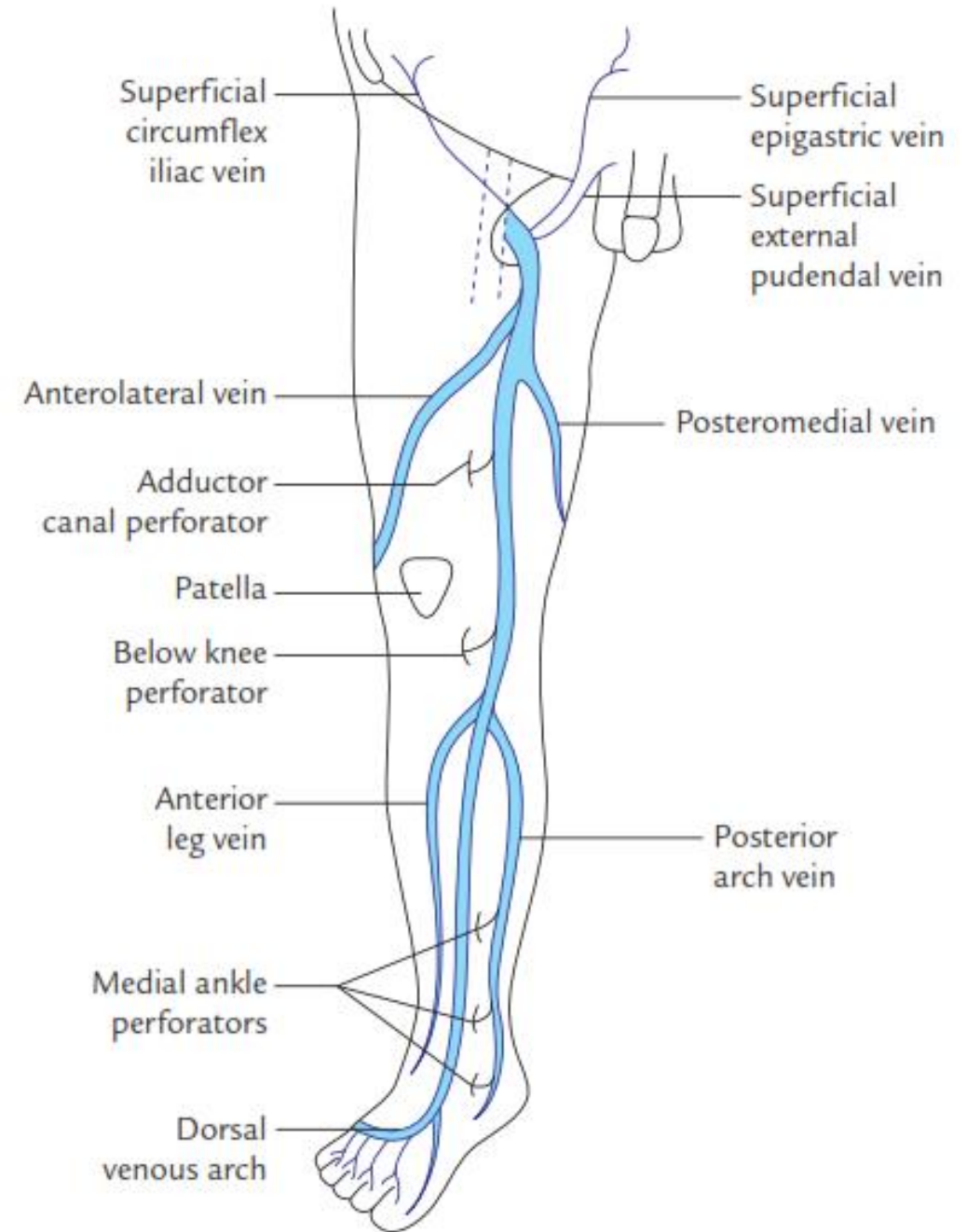


Factors help draining venous blood

- Calf muscle contraction
- Valves in the veins
- Arterial pulsation of adjacent arteries
- Negative pressure in the thorax
- Lying in recumbent position

Long (great) saphenous vein

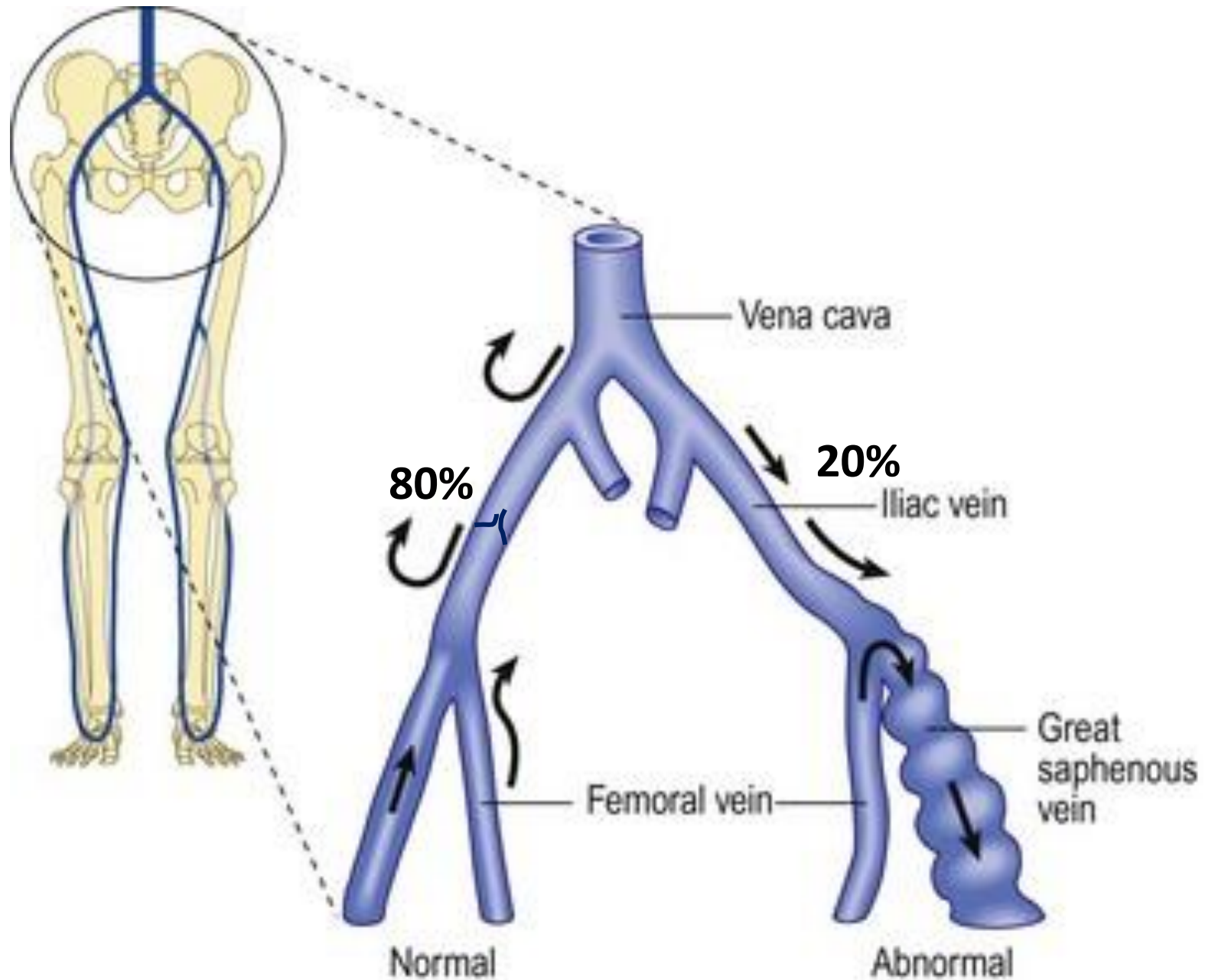
- Course
 - Tributaries
 - At leg: post. arch vein, ant. leg vein
- Communicating veins with short saphenous
- At the thigh: anterolateral & posteromedial
 - At saphenous hiatus: 3 superficial



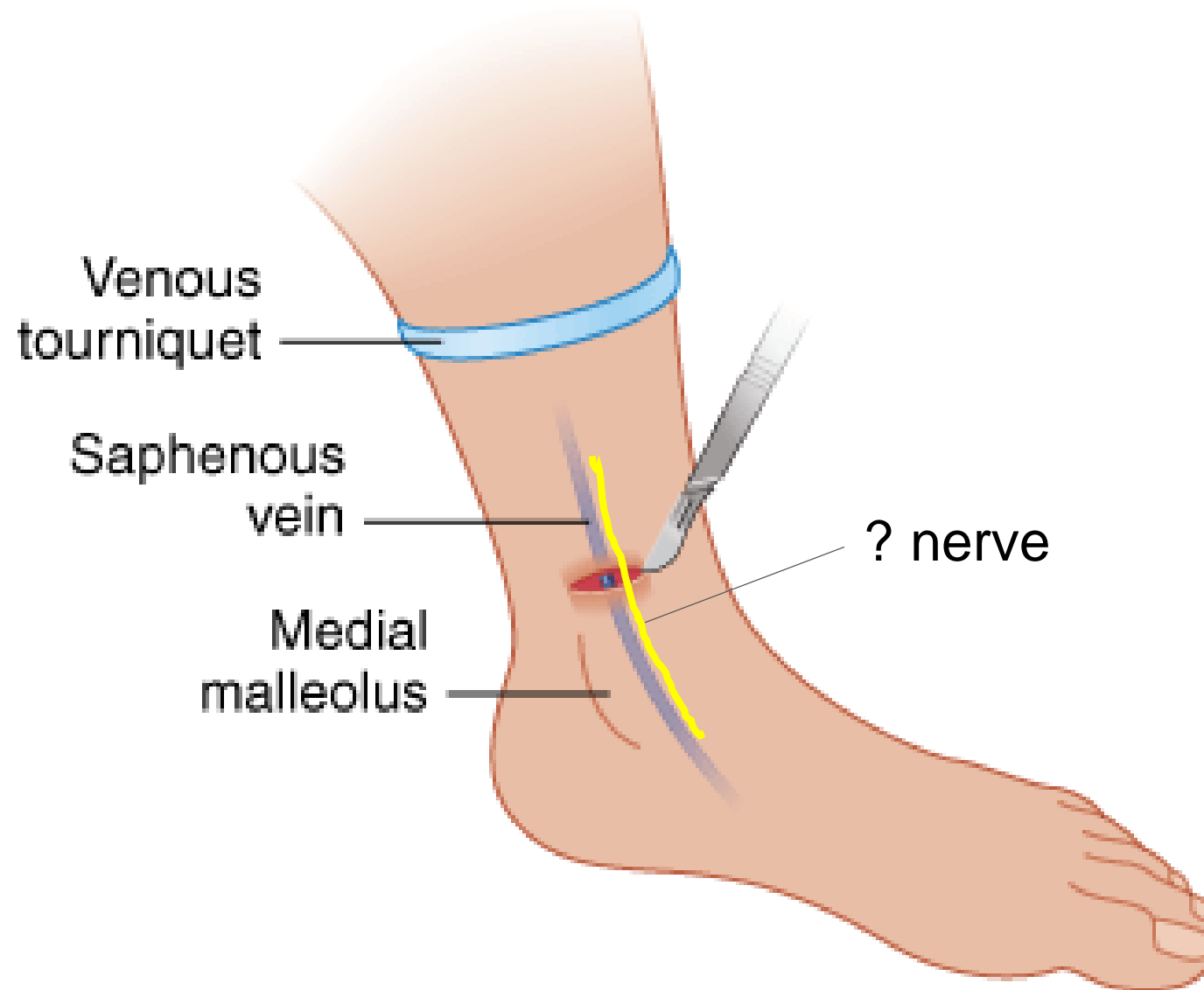
10-20 valves

Saphinofemoral junction

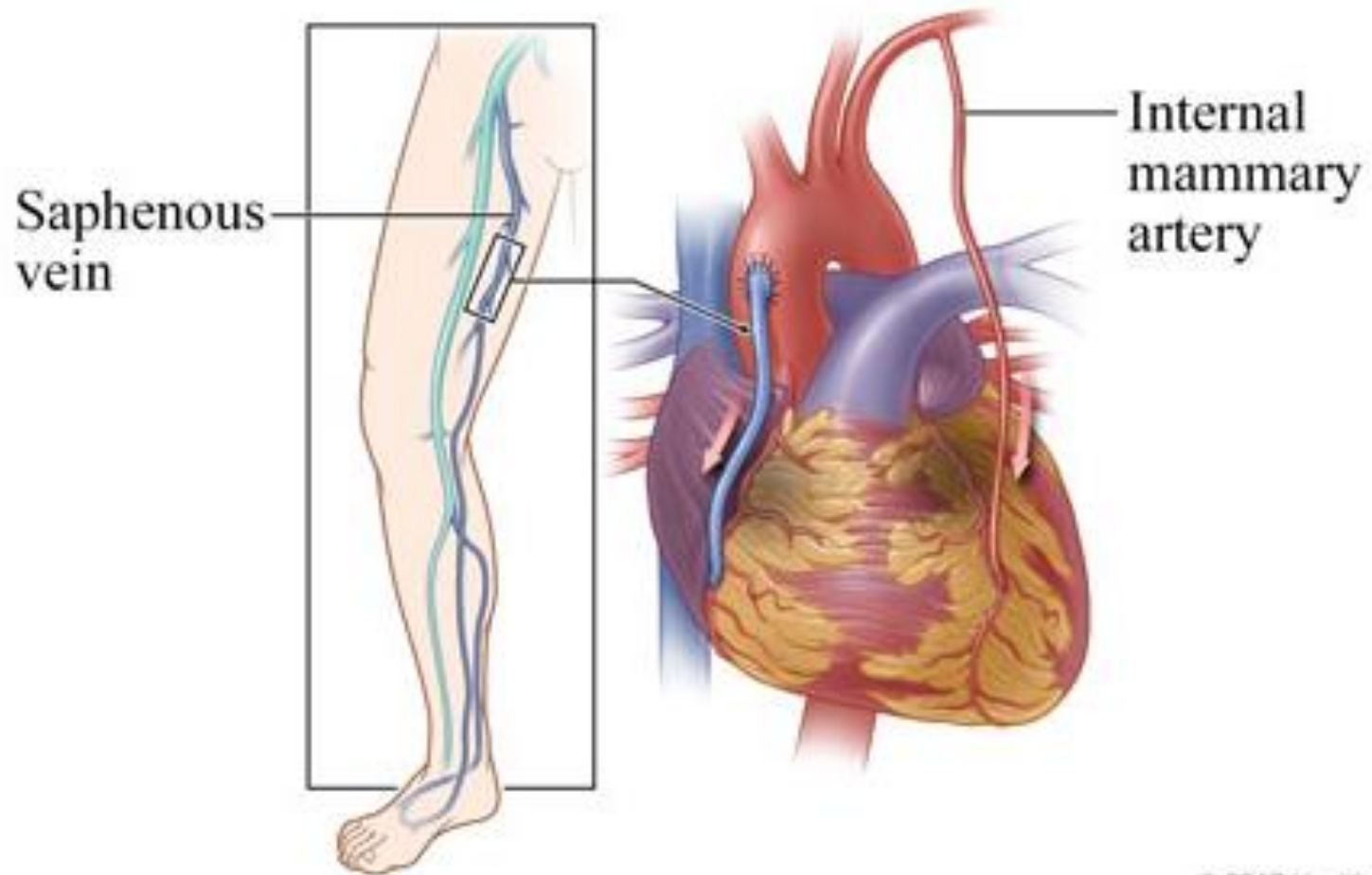
80% external iliac vein
valve



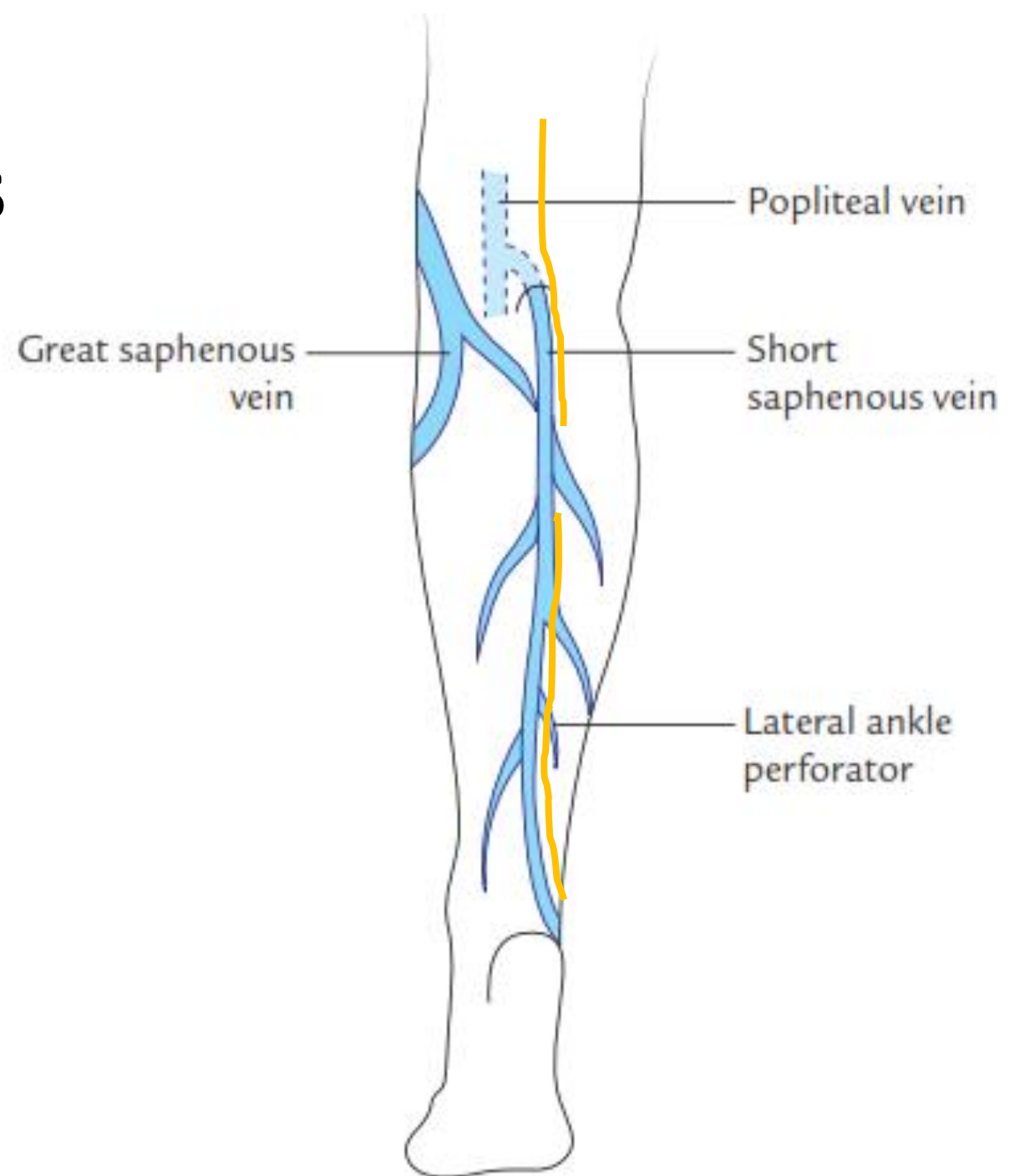
Great saphenous venesection



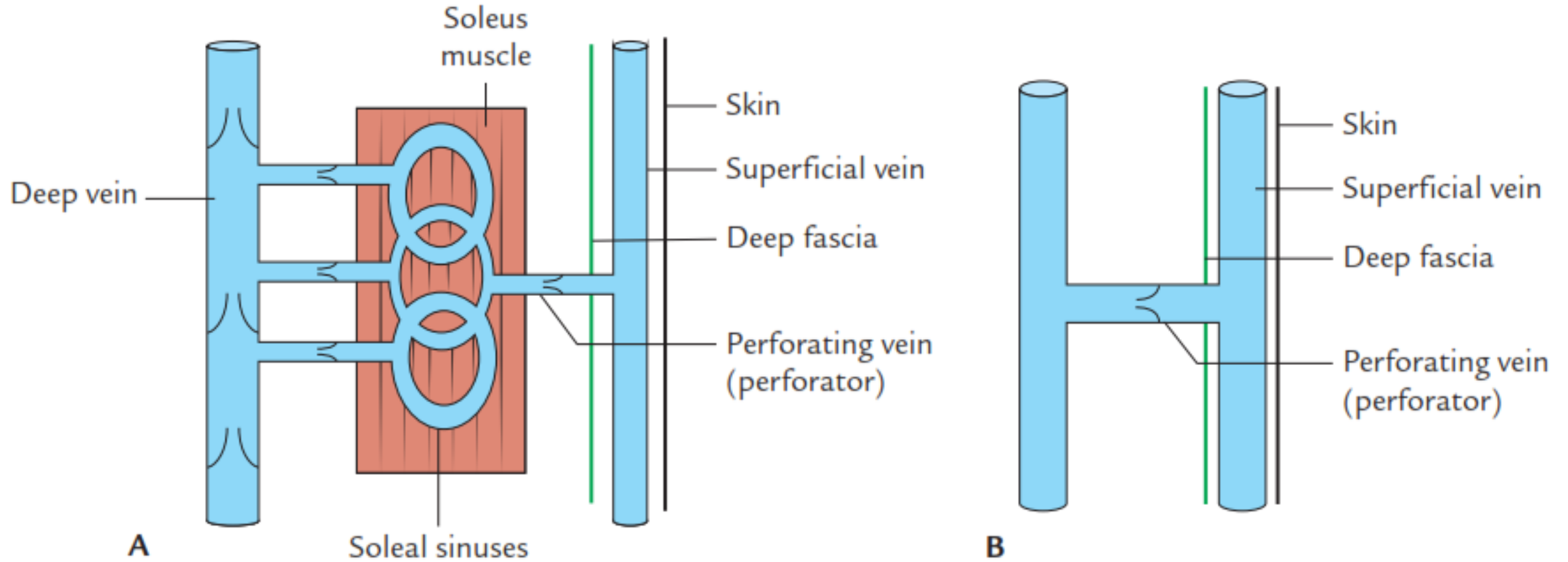
Coronary artery bypass graft (CABG)

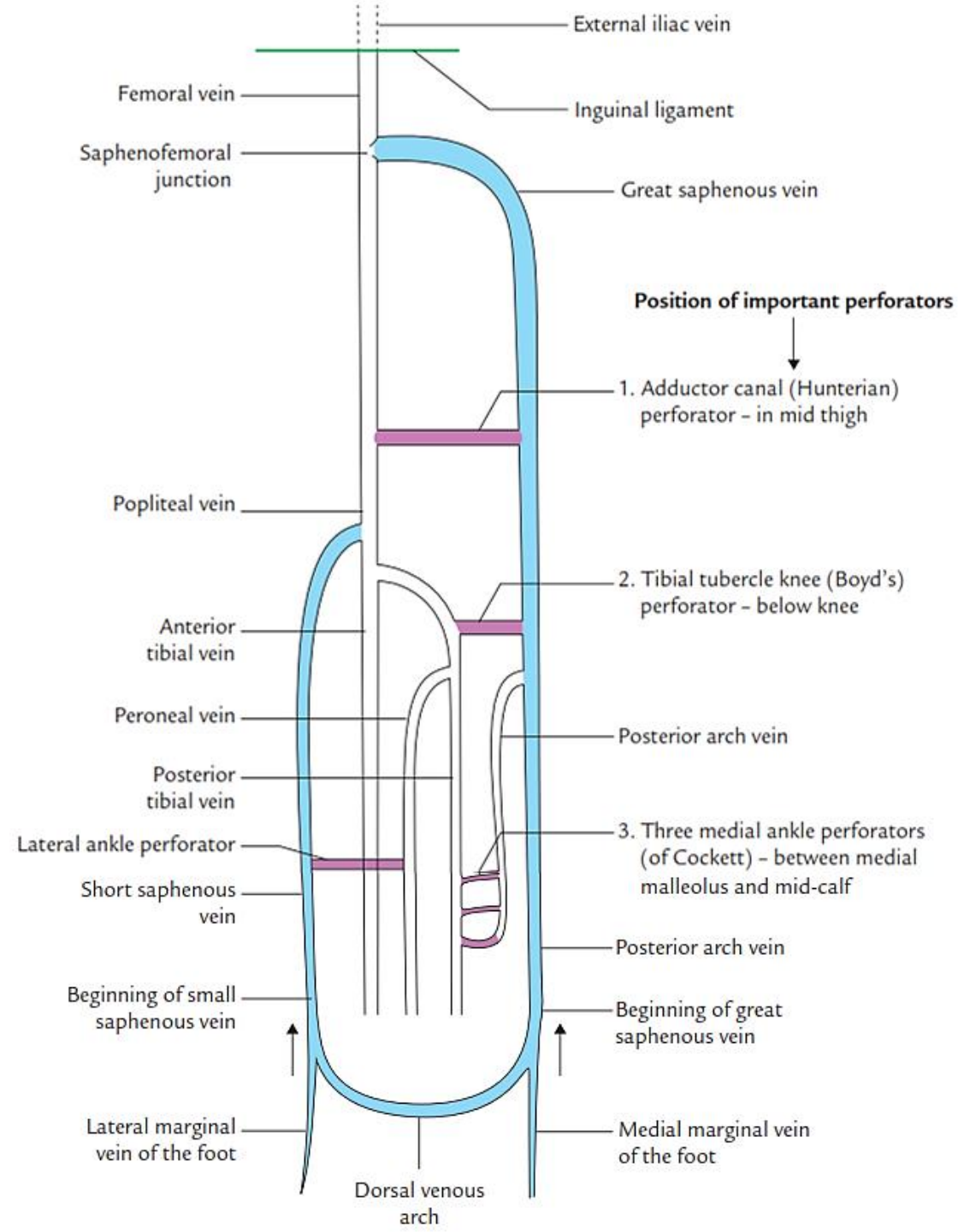


Short (small) saphenous



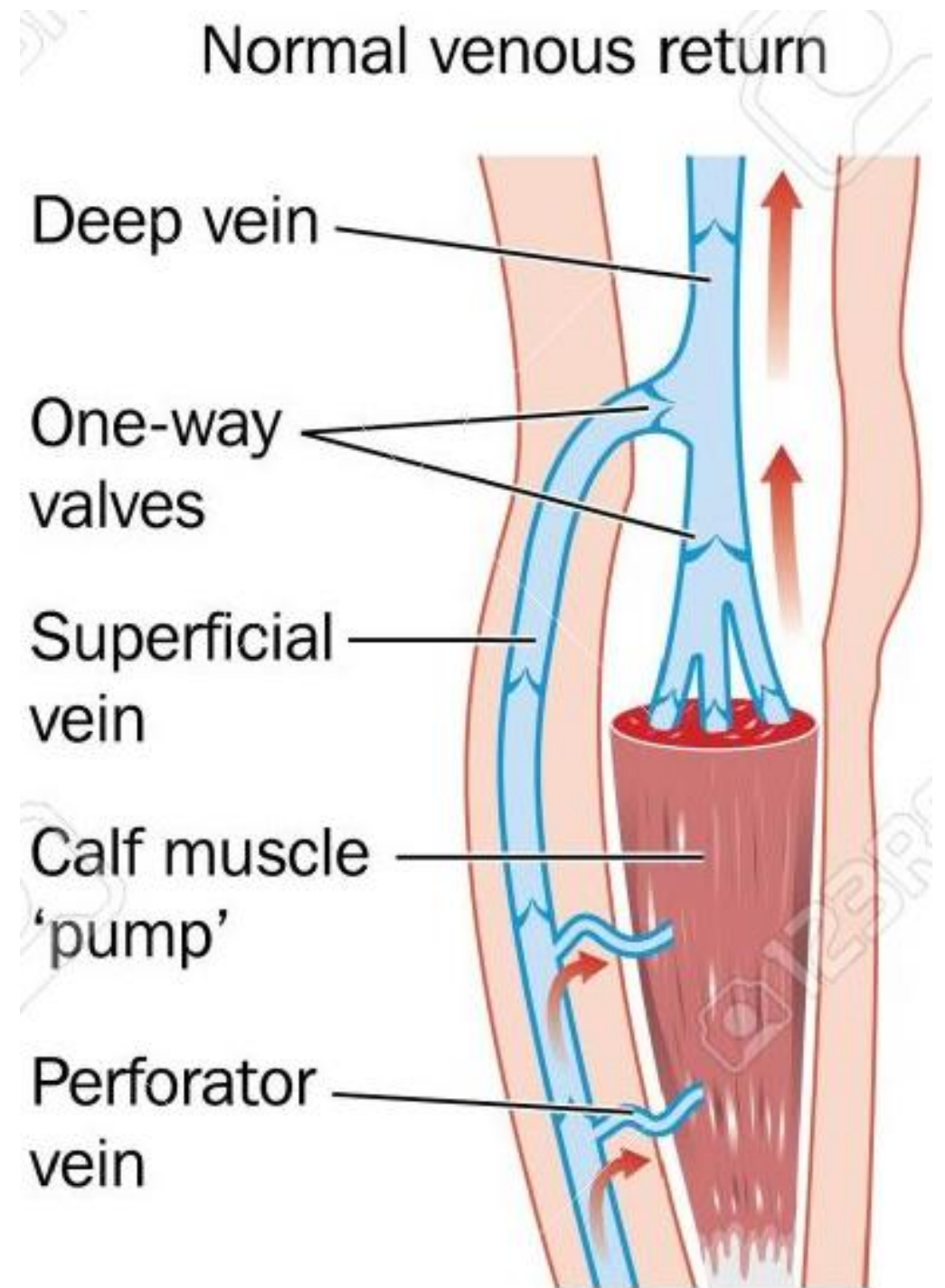
Perforating veins

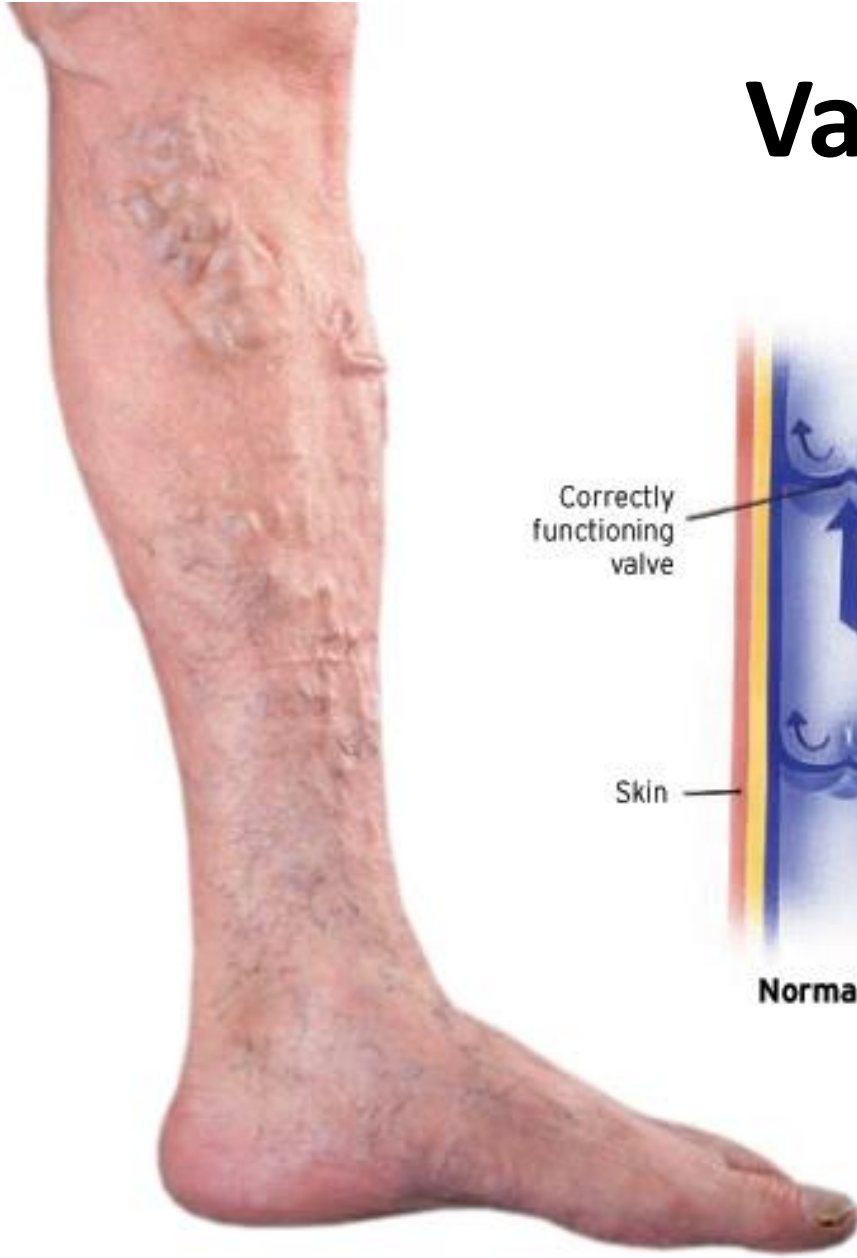




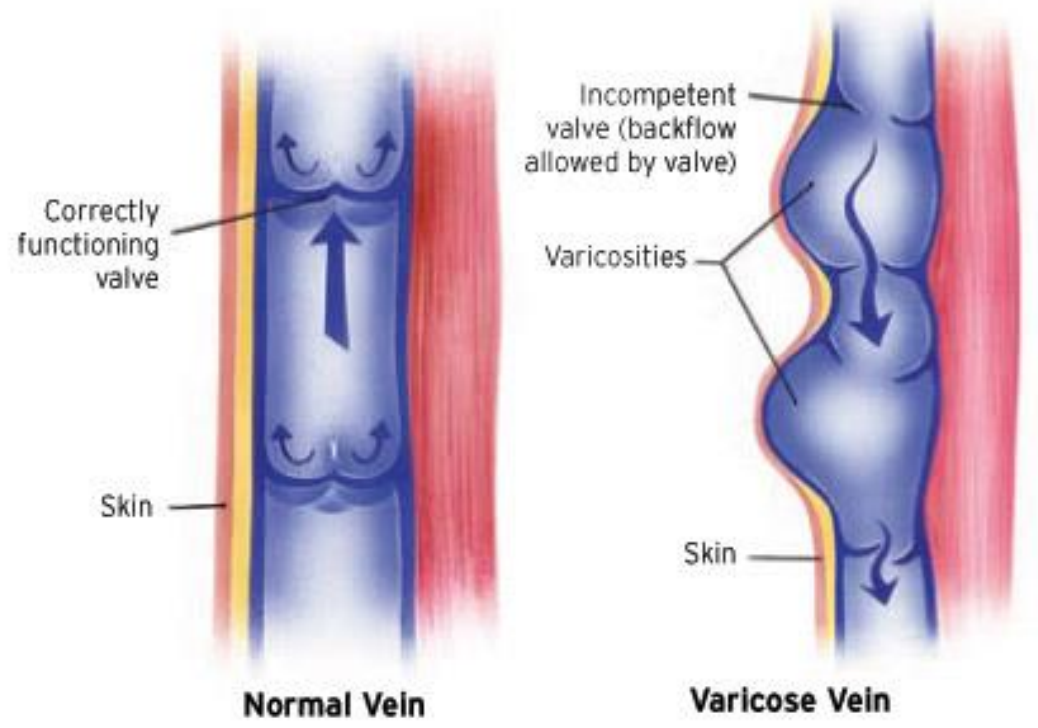
Peripheral (second) heart

- Calf pump





Varicose veins



Deep venous thrombosis

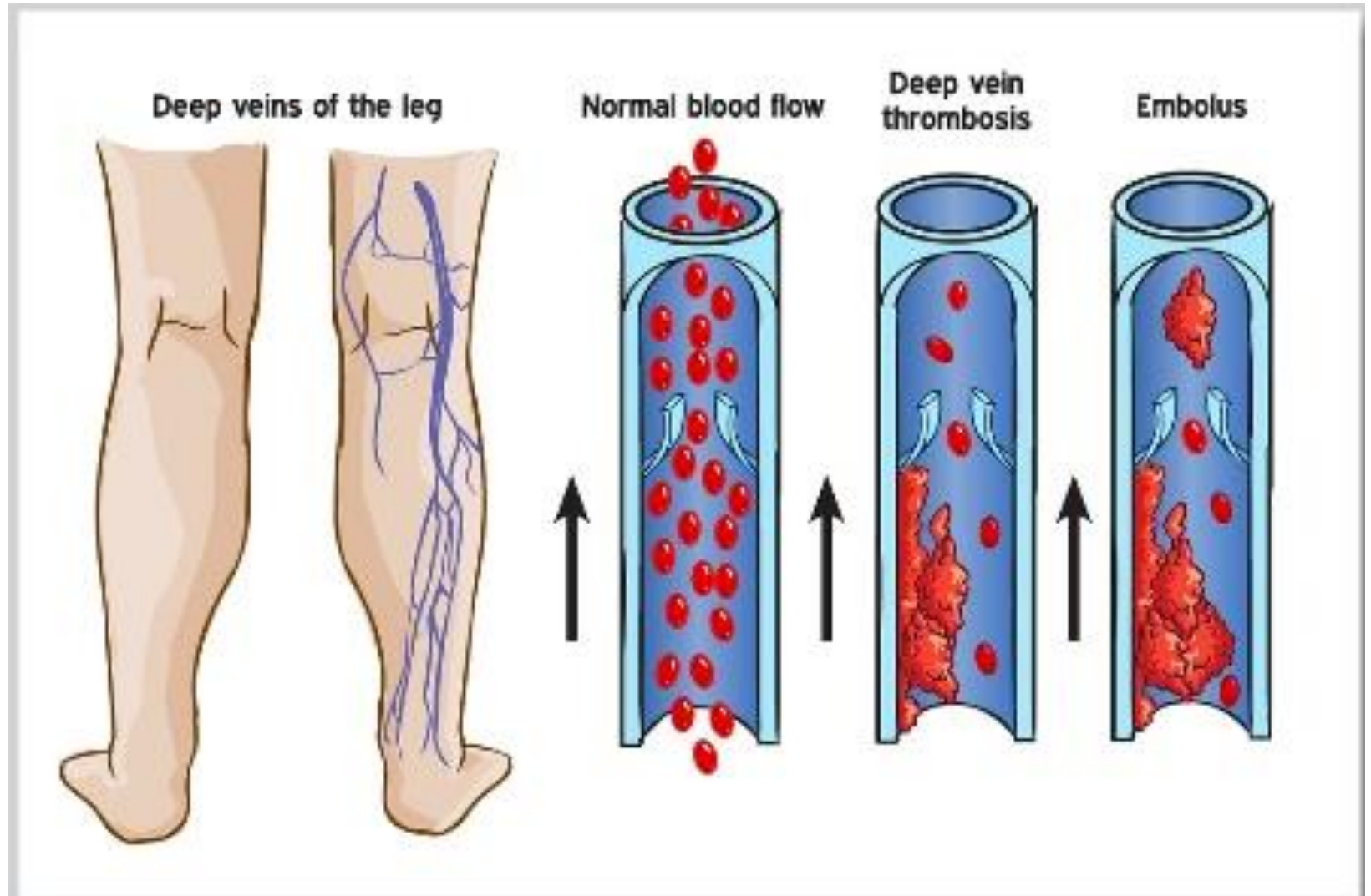
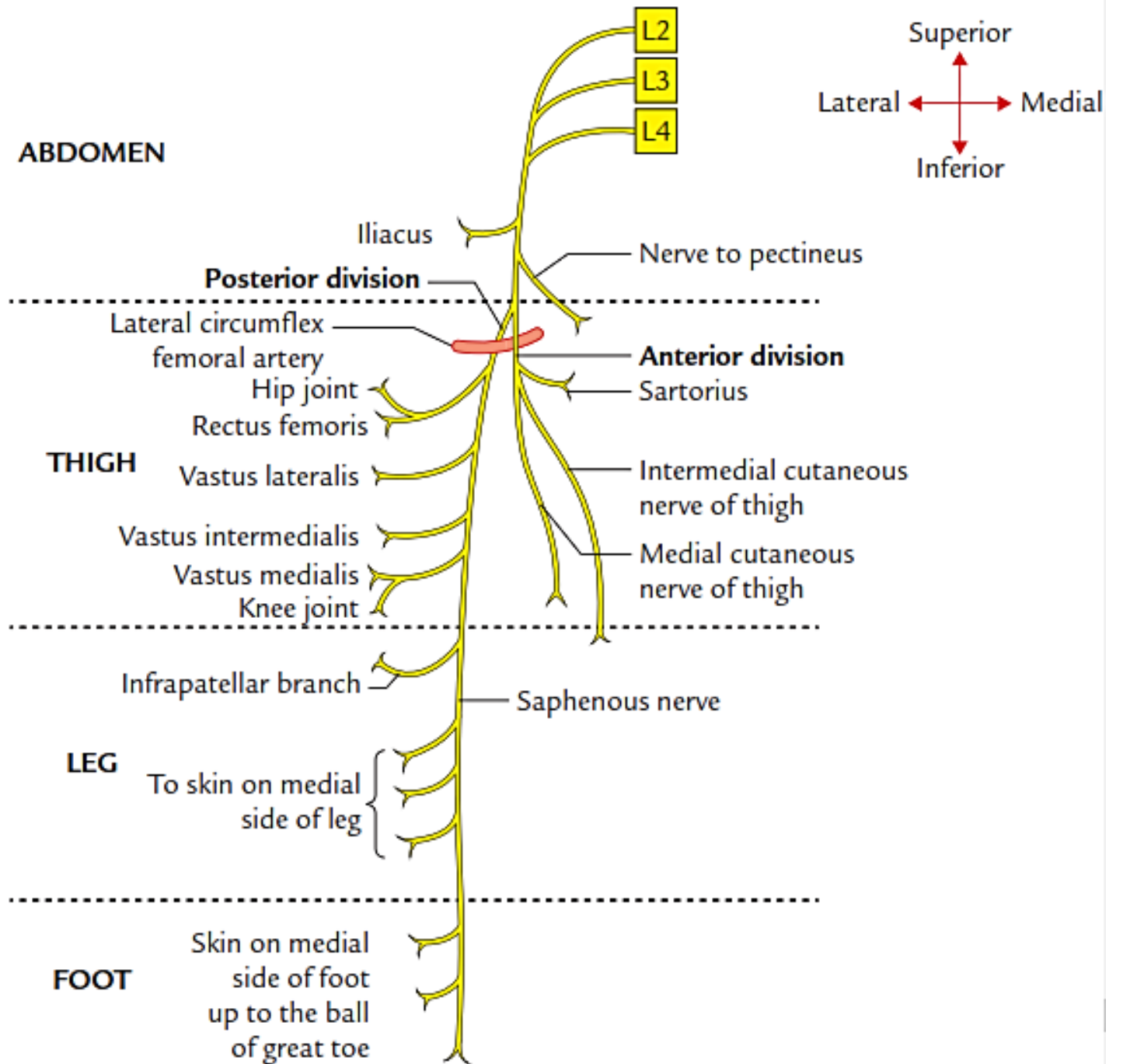


Figure 1: Deep vein thrombosis (DVT)

Lower limb Nerve injuries



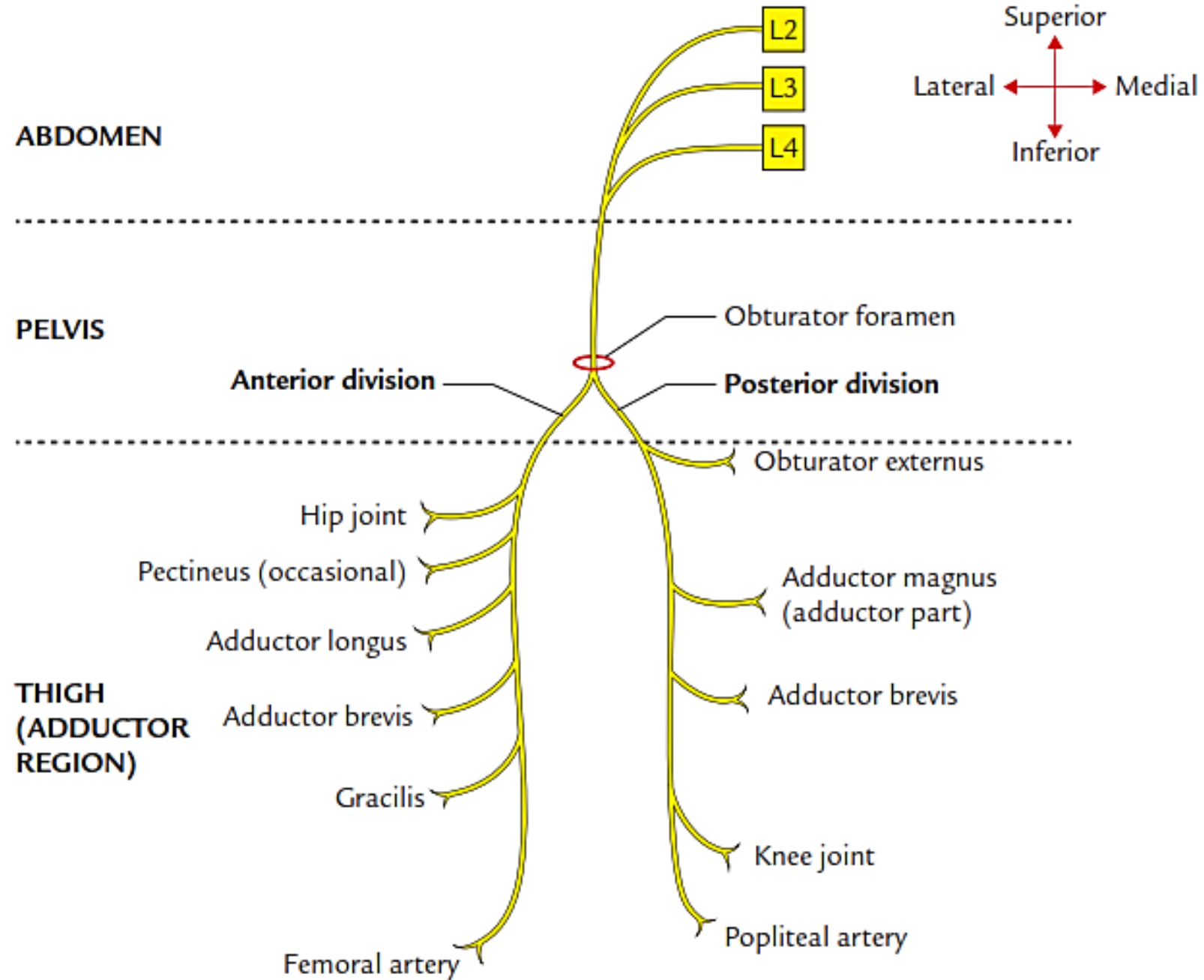
Femoral nerve



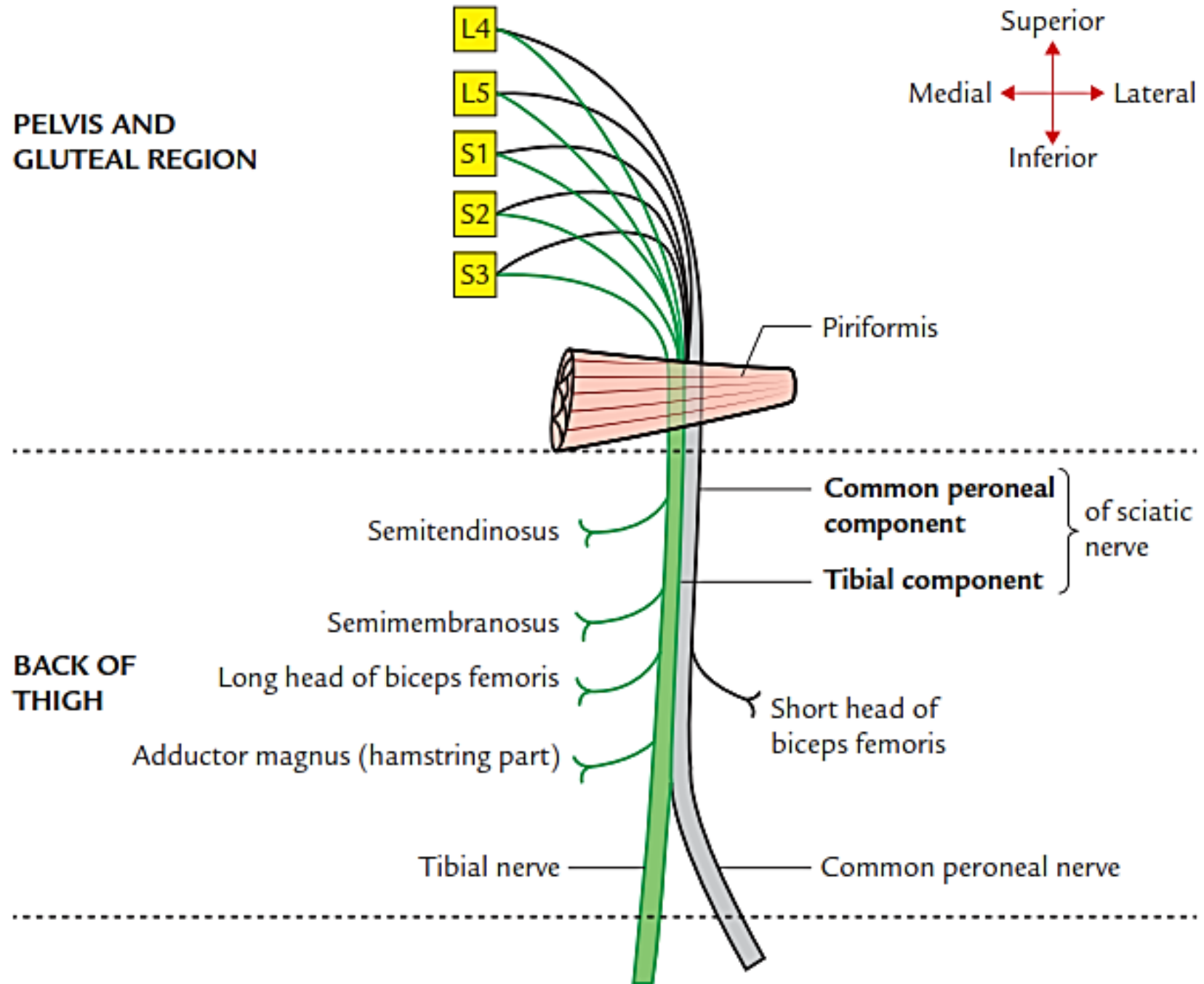


Quadriceps muscle atrophy

Obturator nerve

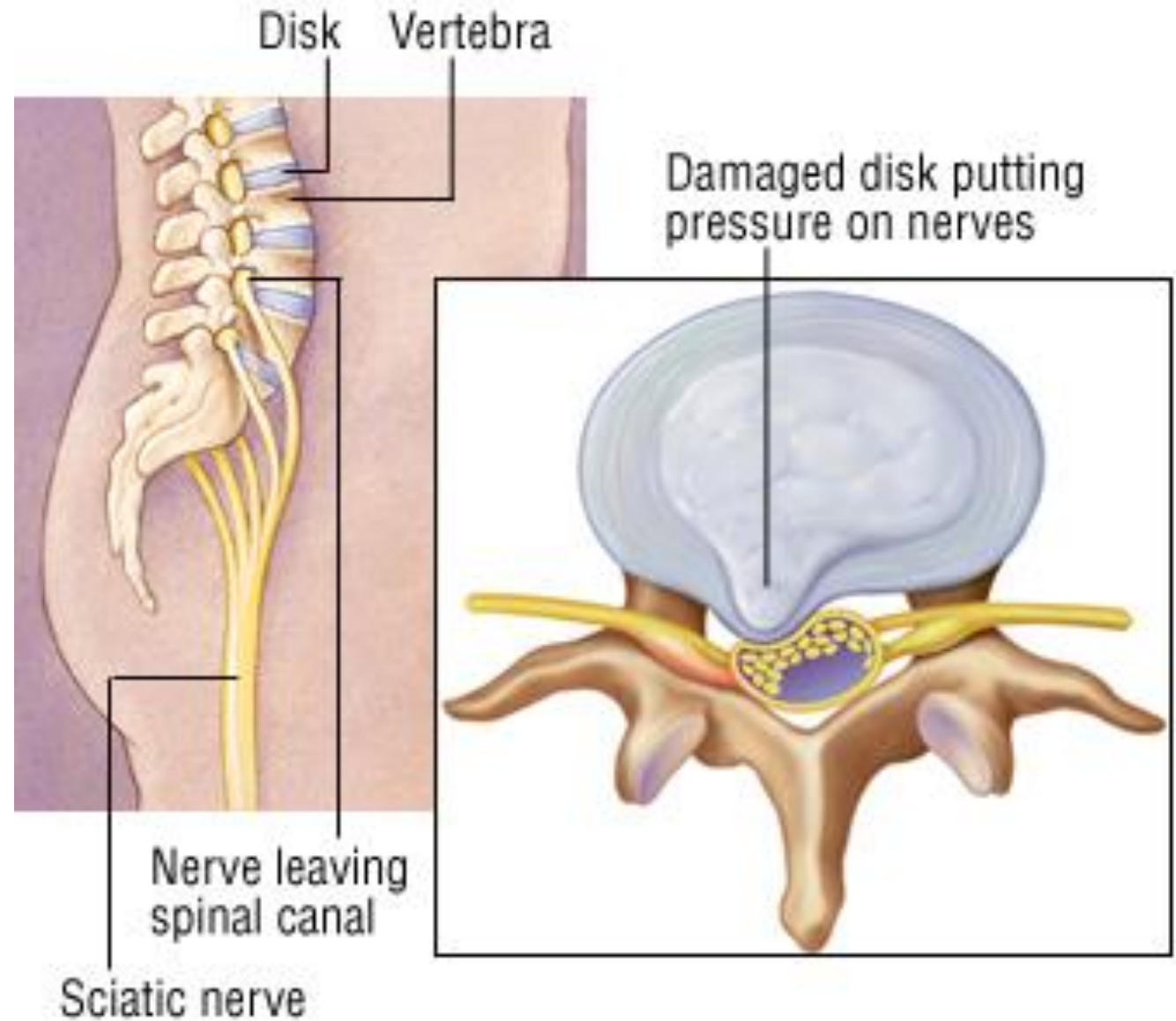


Sciatic nerve



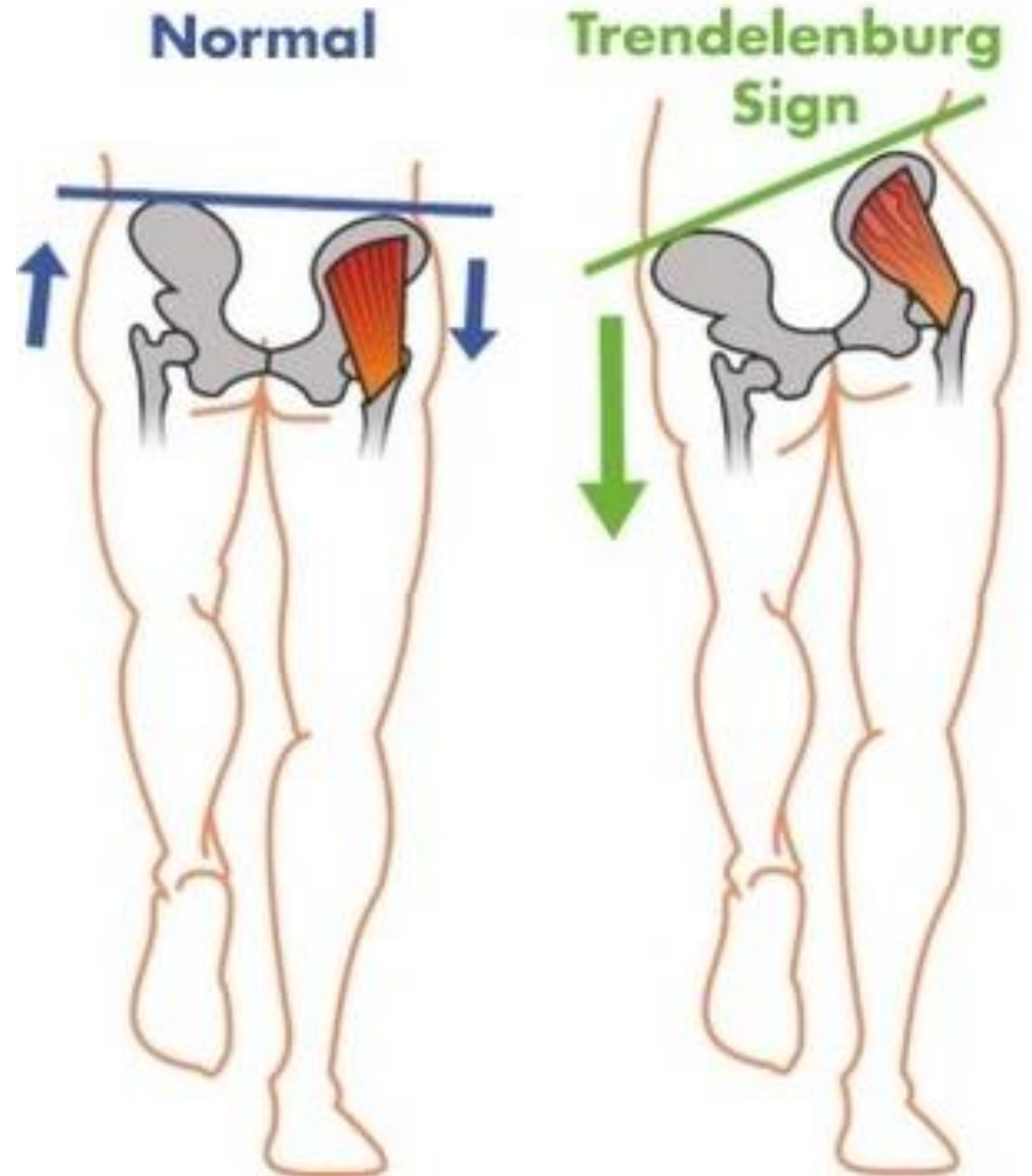
Disc prolapse & sciatica

- L5-S1
- L4-L5

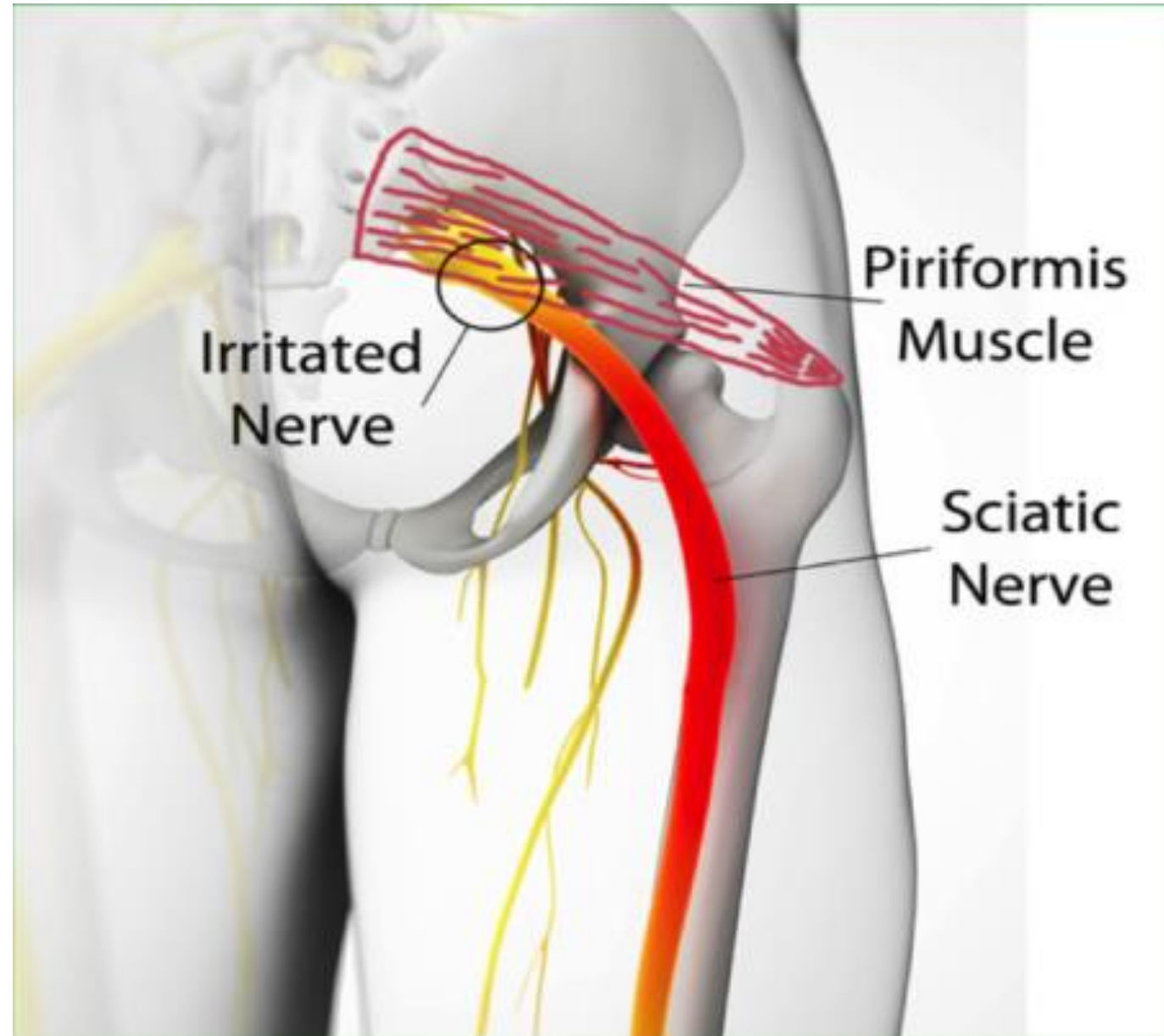


Hip abductors

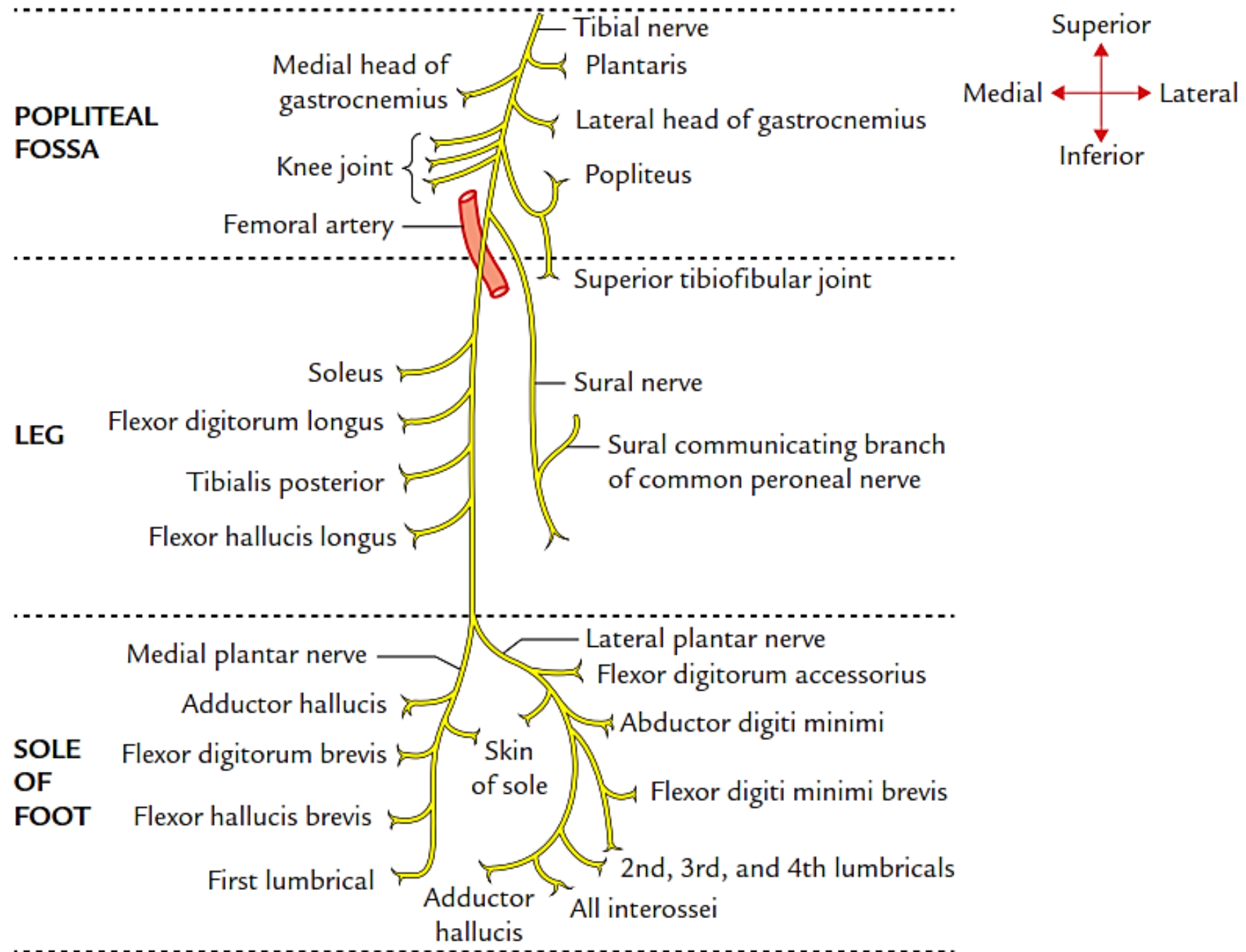
- Sup. Gluteal nerve injury
- Trendelenburg sign



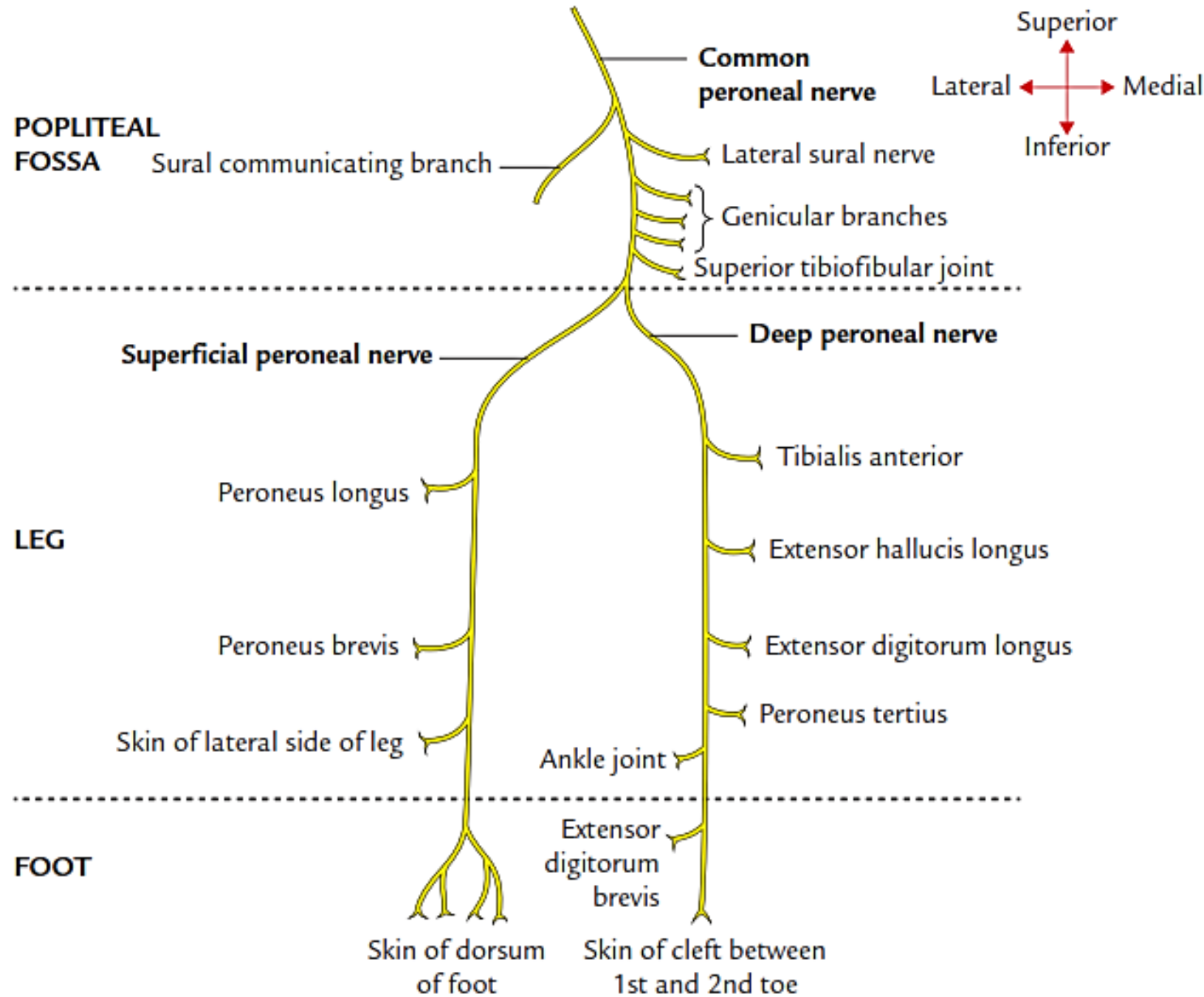
Piriformis syndrome

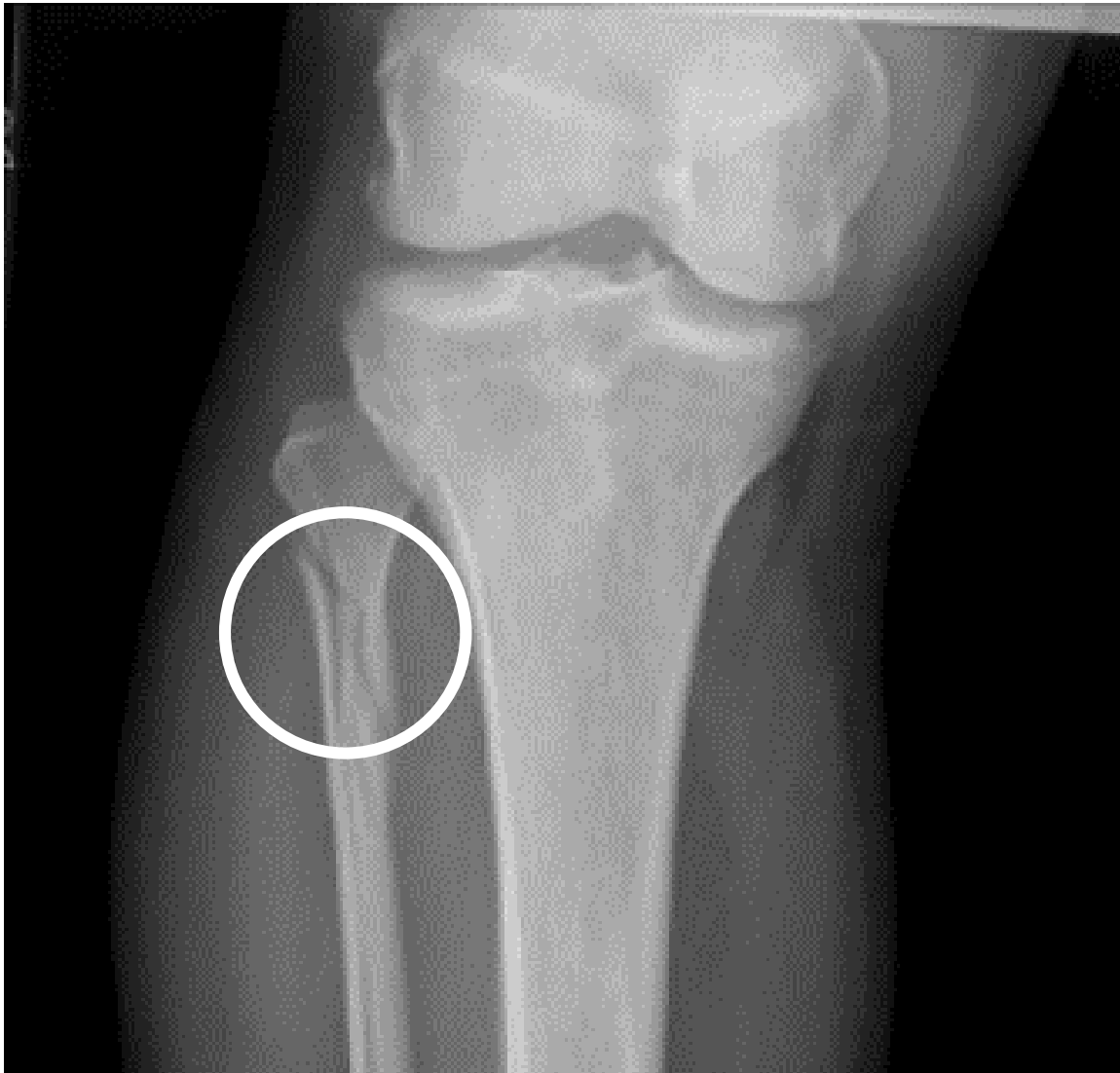


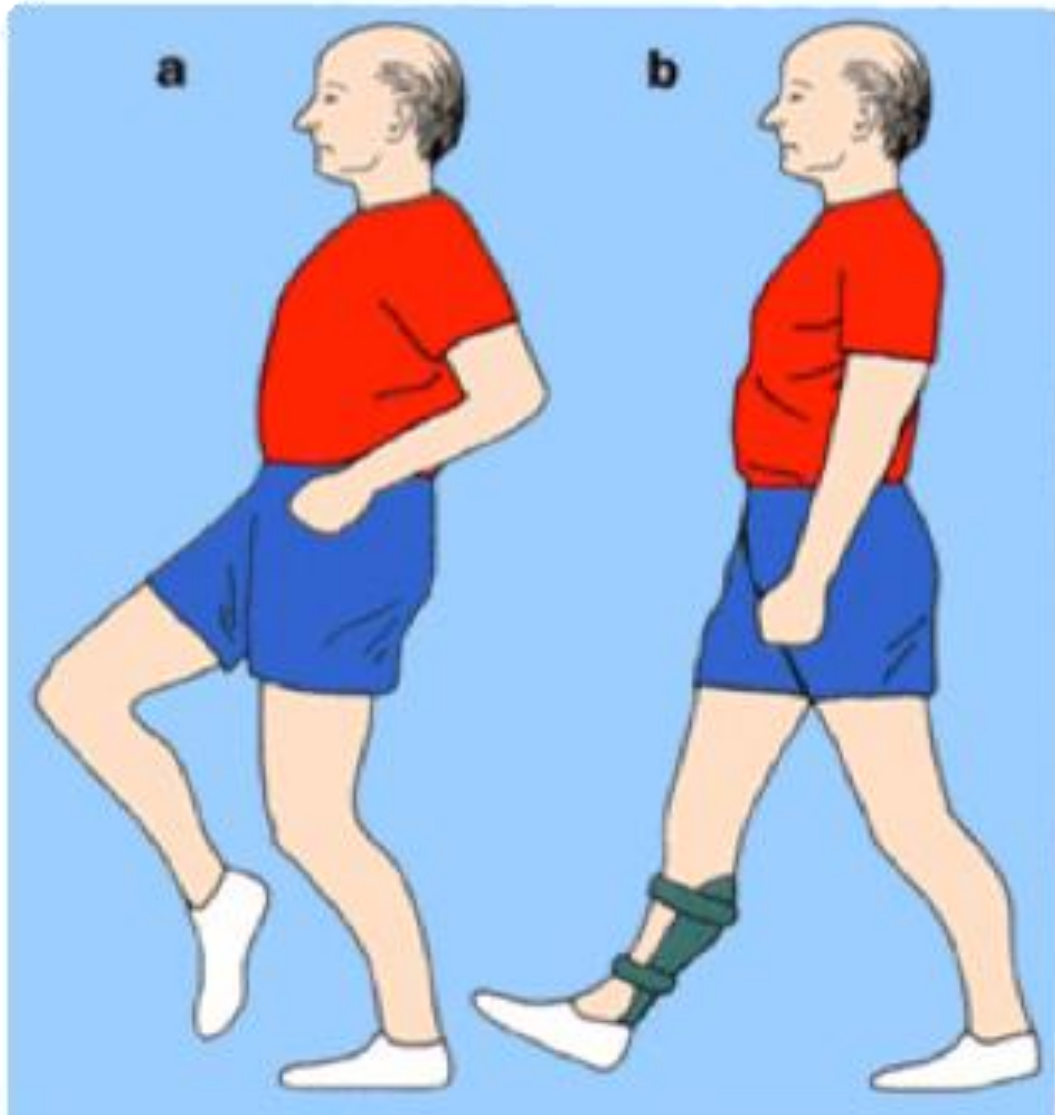
Tibial nerve



Common peroneal nerve

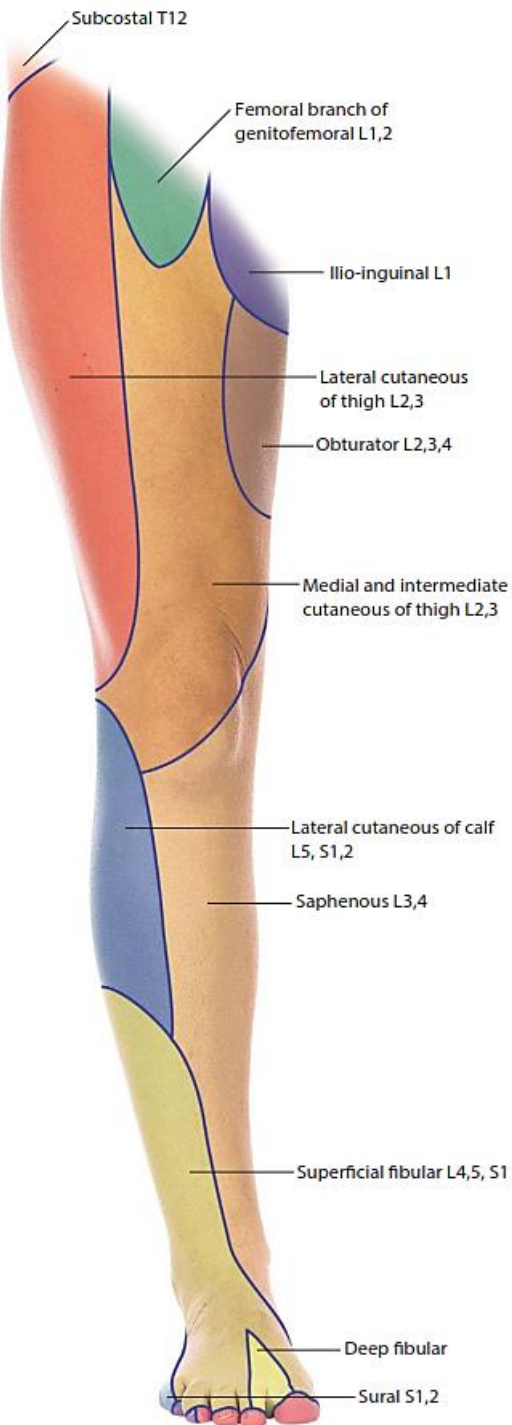


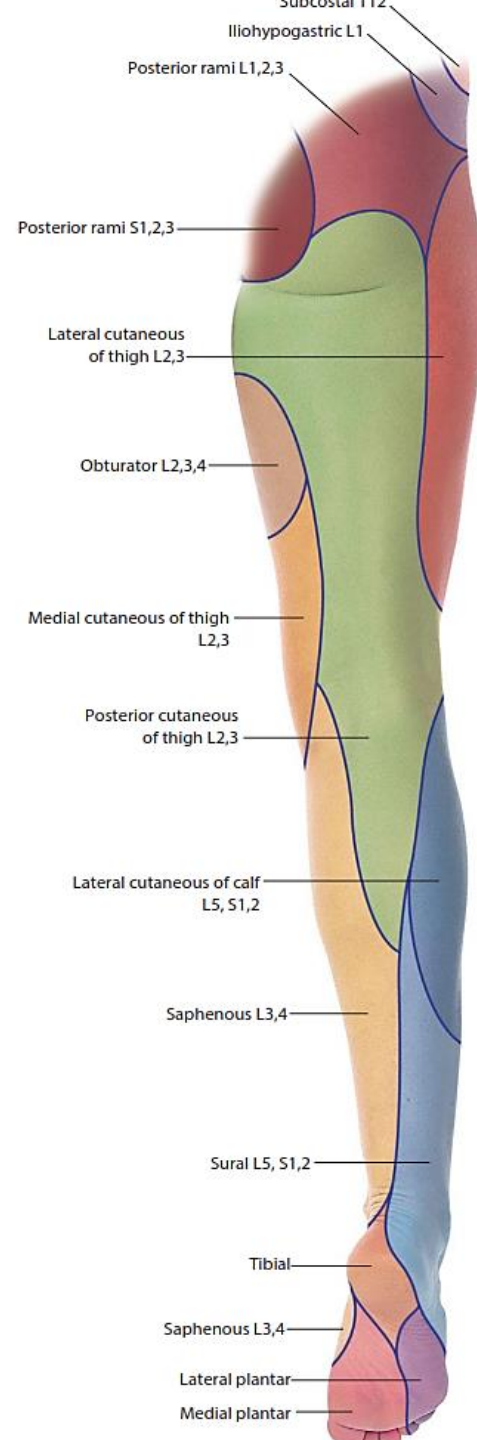
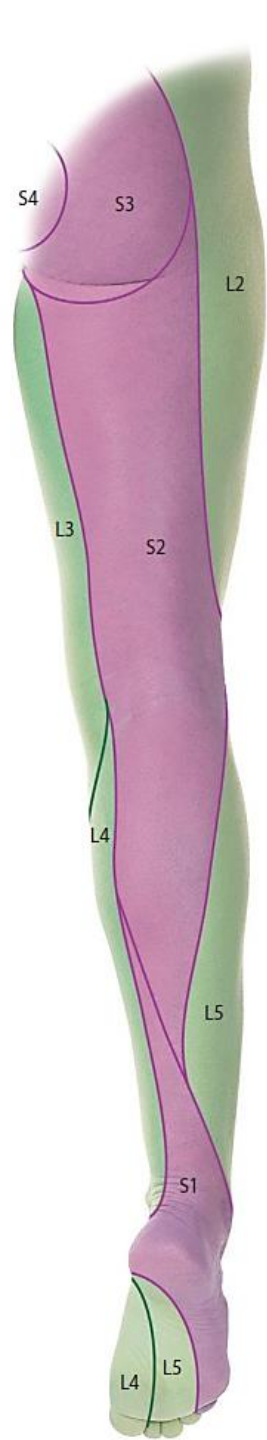




Foot drop

Dermatomes





Myotomes

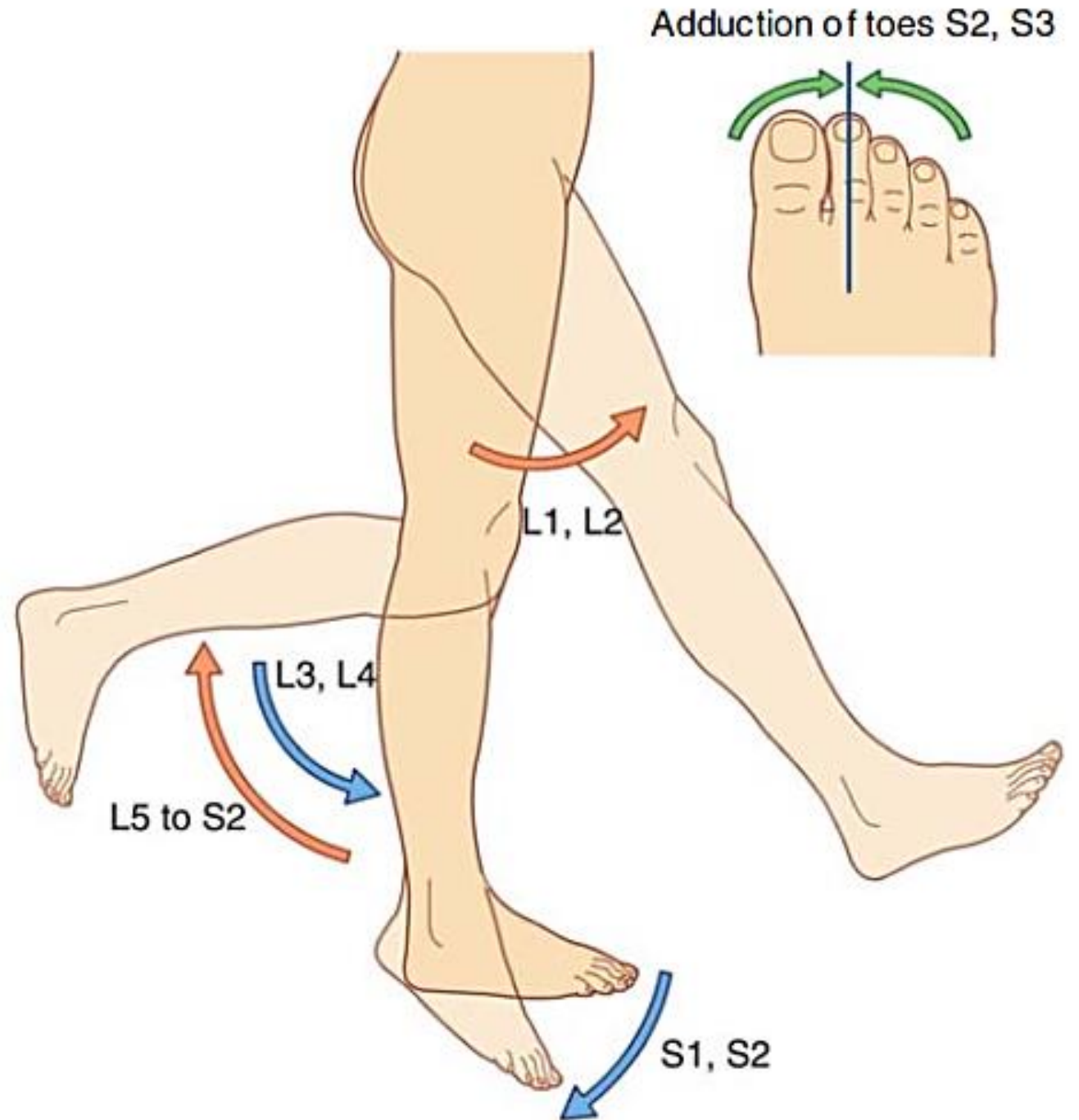
Hip flexion L1, L2

Knee extension L3, L4

Knee flexion L5, S1, S2

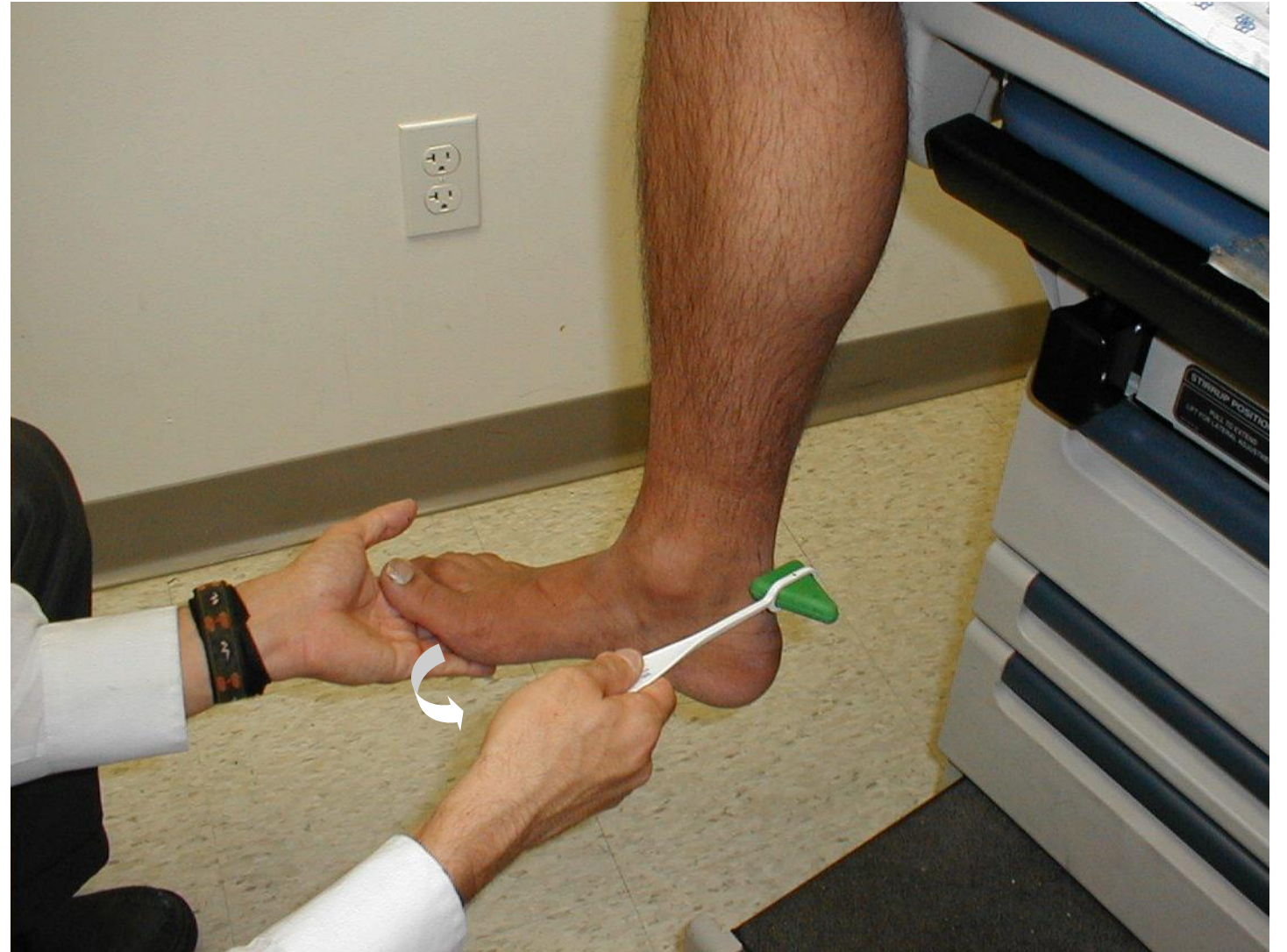
Ankle planter flexion S1, S2

Toes adduction S2, S3



Ankle jerk

S1, S2 spinal levels

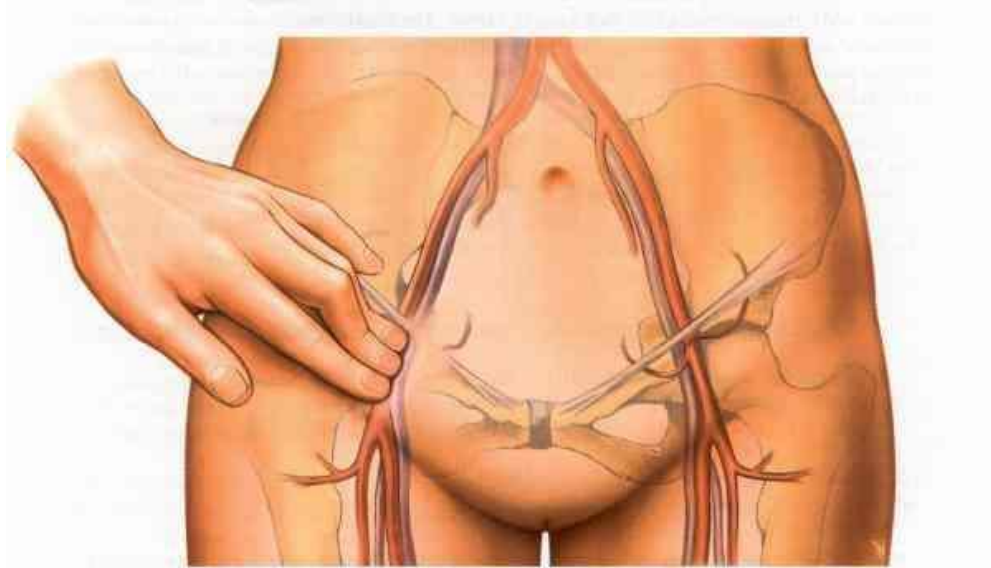


Knee jerk (patellar reflex)

L3, L4 spinal levels



Lower limb pulses



thank you