



NERVES OF THE LEG AND FOOT

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Mention nerve supply of the following muscles

Front of the thigh

Medial side of thigh

Gluteus medius , minimus

Gluteal Maximus

Piriformis

Obturator internus

Quadratus femoris

Hamstring muscles (biceps , Semitendinosus , semimembranosus)

Front of the leg

Lateral of the leg

Posterior of the leg

Sciatic Nerve

Origin :

From sacral plexus, L4,5 ,S1,2,3.

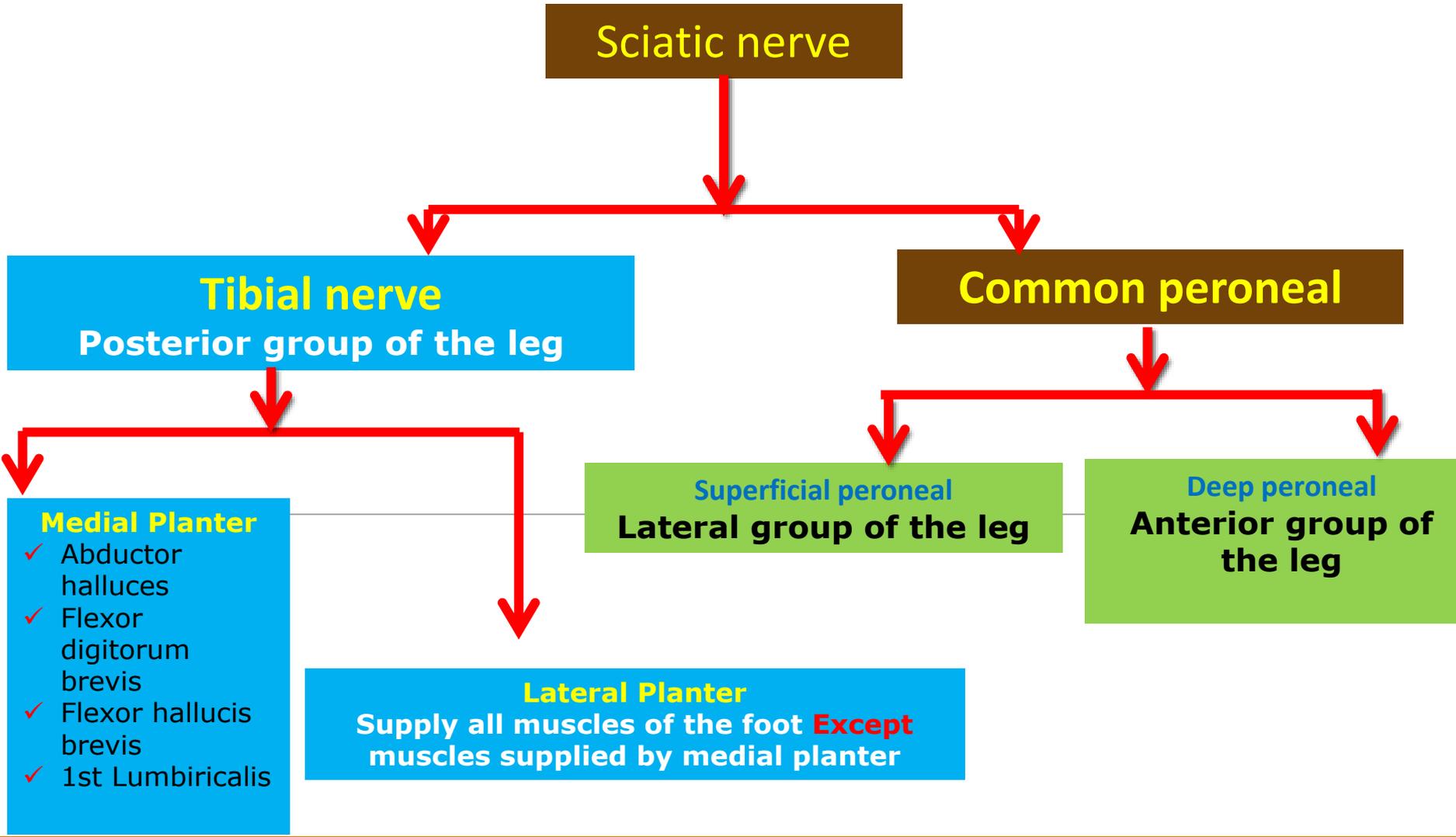
Course :

-It leaves the pelvis through the greater sciatic foramen below piriformis .

-It descends in the gluteal region and back of the thigh.

Termination:

It ends at the popliteal fossa by dividing into tibial and common fibular nerves .



Sciatic nerve

Tibial nerve
Posterior group of the leg

Common peroneal

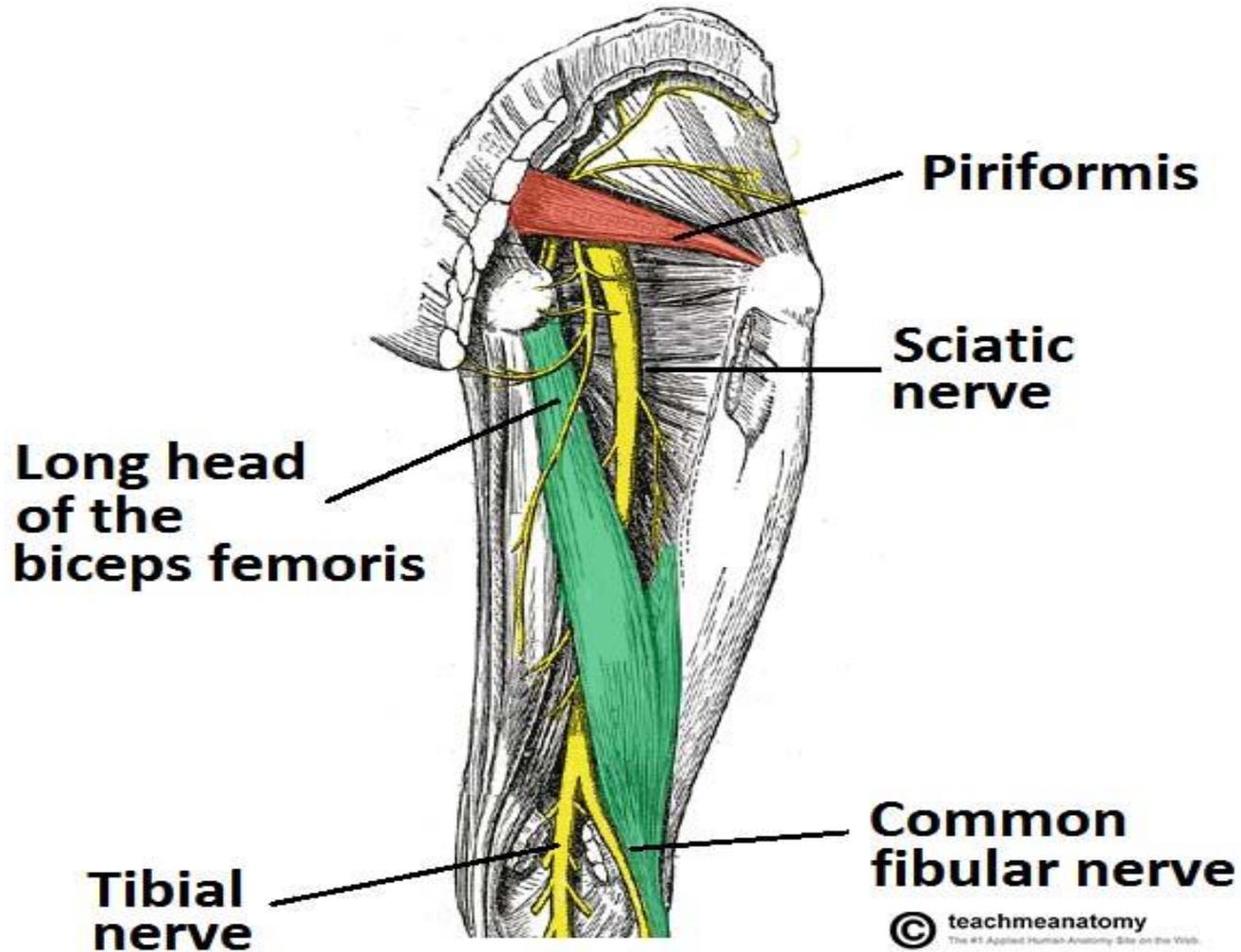
- Medial Planter**
- ✓ Abductor hallucis
 - ✓ Flexor digitorum brevis
 - ✓ Flexor hallucis brevis
 - ✓ 1st Lumbricalis

Lateral Planter
Supply all muscles of the foot **Except**
muscles supplied by medial planter

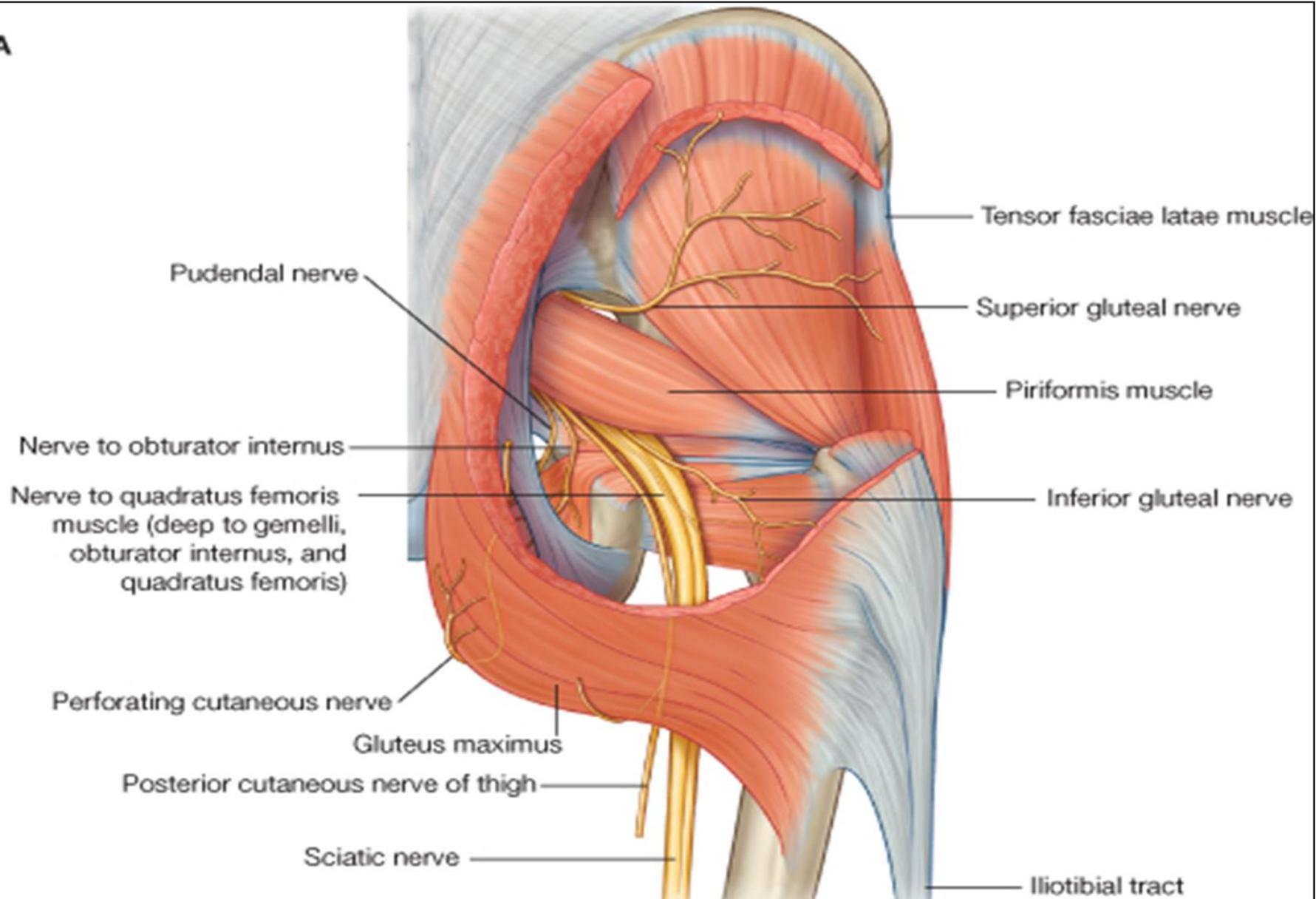
Superficial peroneal
Lateral group of the leg

Deep peroneal
Anterior group of the leg

Sciatic nerve



A



Tibial Nerve

Origin :

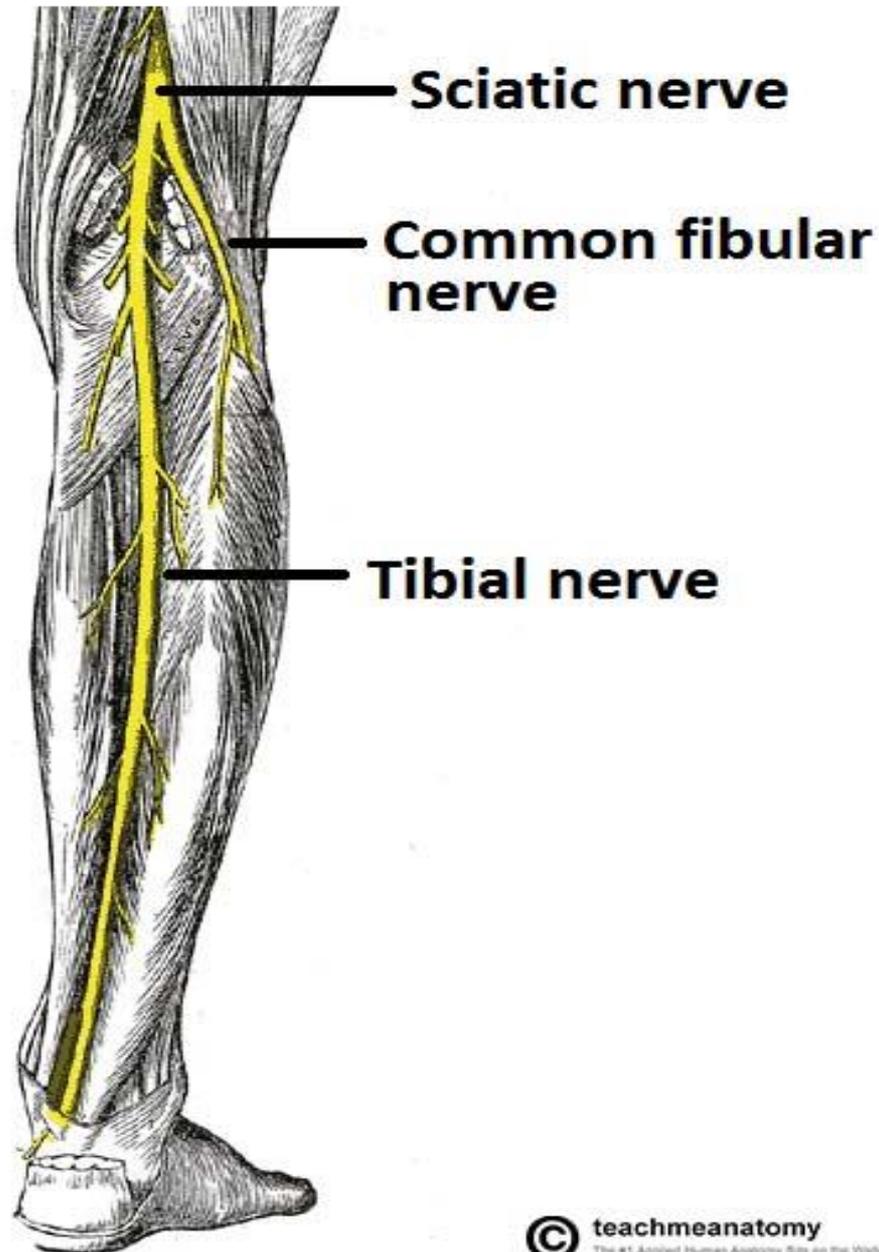
From Sciatic nerve at the popliteal fossa.

Course :

- ❑ It enters popliteal fossa from upper angle and leaves it at its lower angle to enter the leg.
- ❑ It passes between superficial and deep muscles of posterior compartment of the leg .

Termination:

It ends deep to flexor retinaculum by dividing into medial and lateral plantar nerves .



Branches

Muscular

- 1-Hamstring muscles except short head of biceps
- 2-Gastrocnemius
- 3-Plantaris
- 4-Soleus
- 5-Popliteus
- 6-Flexor digitorum longus
- 7-Flexor hallucis longus
- 8-Tibialis posterior.

Sensory

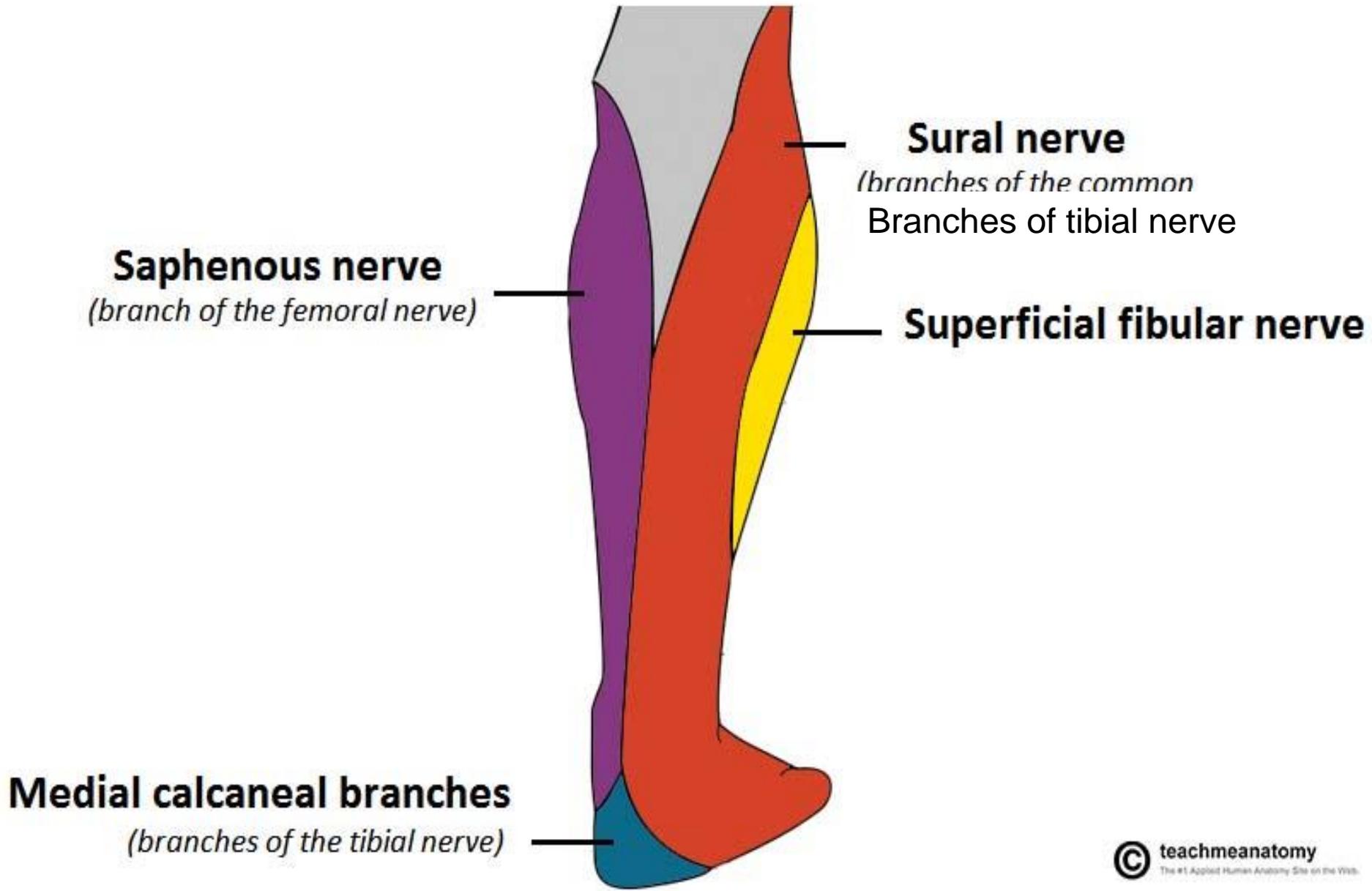
1- **Sural nerve:**

It supplies the skin of the calf , **lateral** border of the foot and the **lateral** side of the little toe

2-Medial calcaneal branch : supplies the skin over the medial surface of the heel.

3-Medial plantar nerve : sensory to Medial 2/3 of sole and medial three and a half toes.

4-Lateral plantar nerve : sensory to Lateral 1/3 of sole and lateral one and a half toes



Saphenous nerve
(branch of the femoral nerve)

Sural nerve
*(branches of the common
Branches of tibial nerve)*

Superficial fibular nerve

Medial calcaneal branches
(branches of the tibial nerve)

Lateral plantar nerve

(branch of the tibial nerve)

Medial plantar nerve

(branch of the tibial nerve)

Saphenous nerve

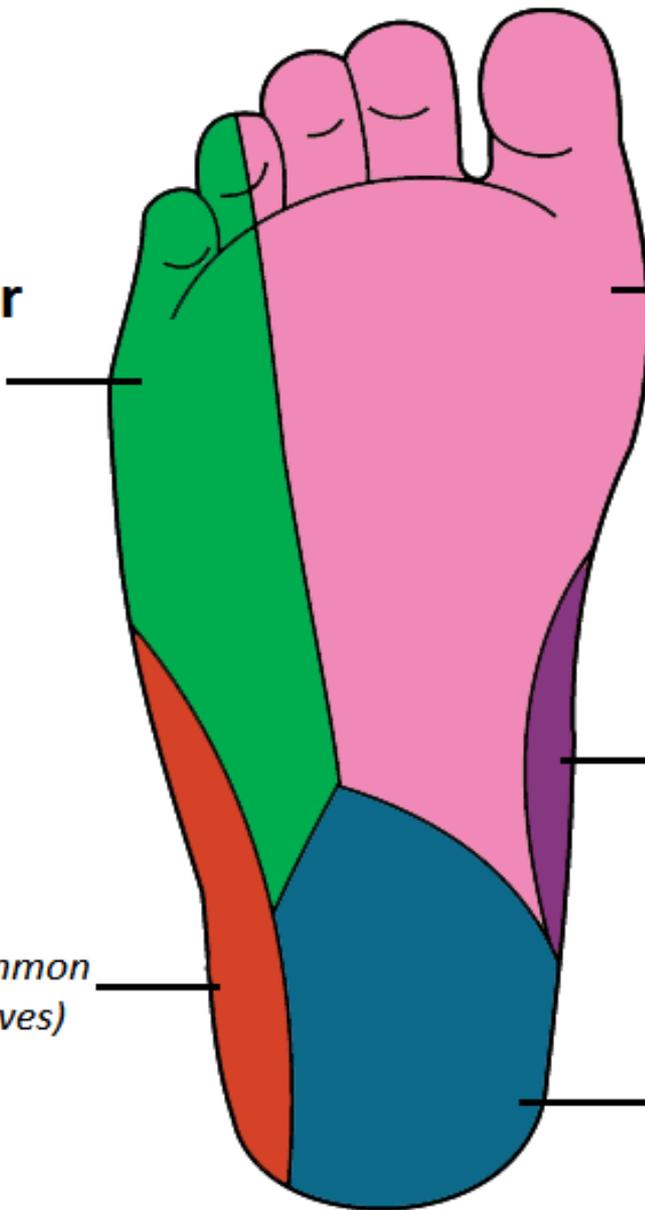
(branch of the femoral nerve)

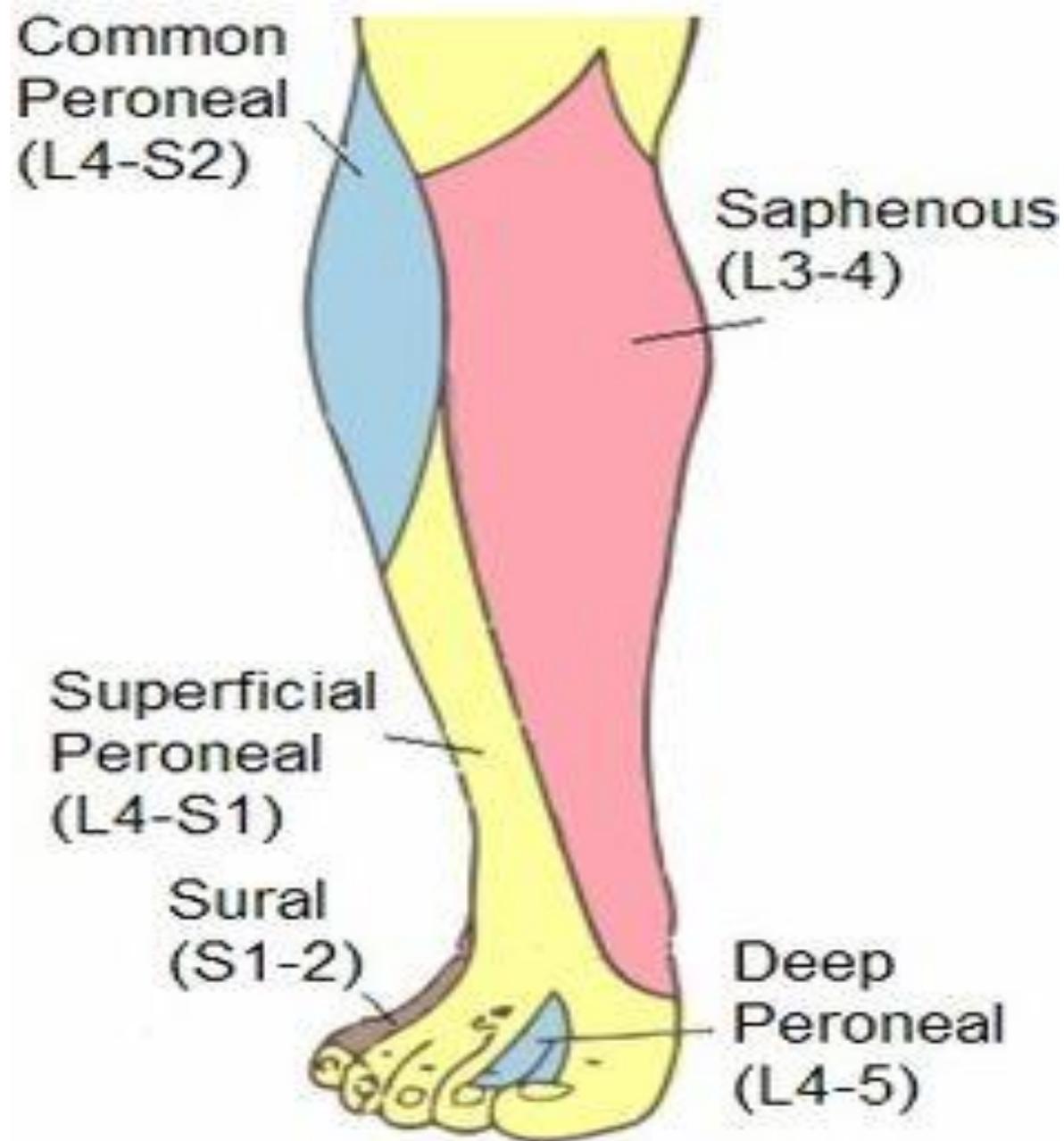
Sural nerve

(branches of the common fibular and tibial nerves)

Medial calcaneal branches

(branches of the tibial nerve)





Tibial nerve Injury

Motor

Paralysis of muscles of the posterior compartment of the leg and foot muscles

Manifestation

- Weakness of plantarflexion at the ankle
- Foot is dorsiflexed and everted
- Clawing of toes

Deformity : Calcaneovalgus

Sensory

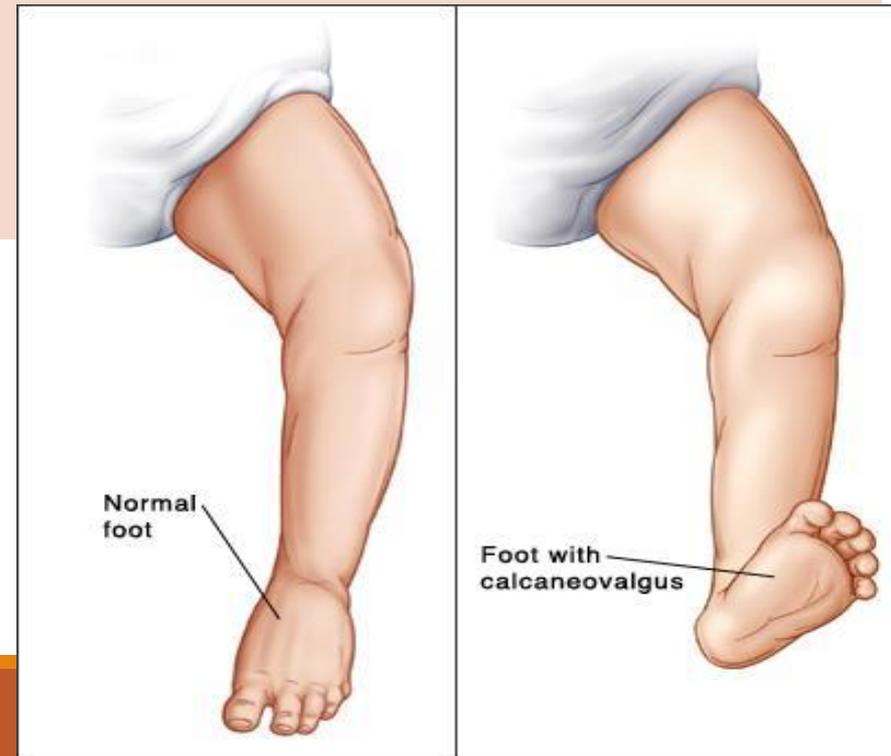
Sensory loss from :

Most of the sole of the foot -

EXCEPT

Small area on the medial side -

Calcaneovalgus deformity



Tarsal Tunnel Syndrome

Due to compression of Tibial nerve as it travels through the tarsal tunnel.

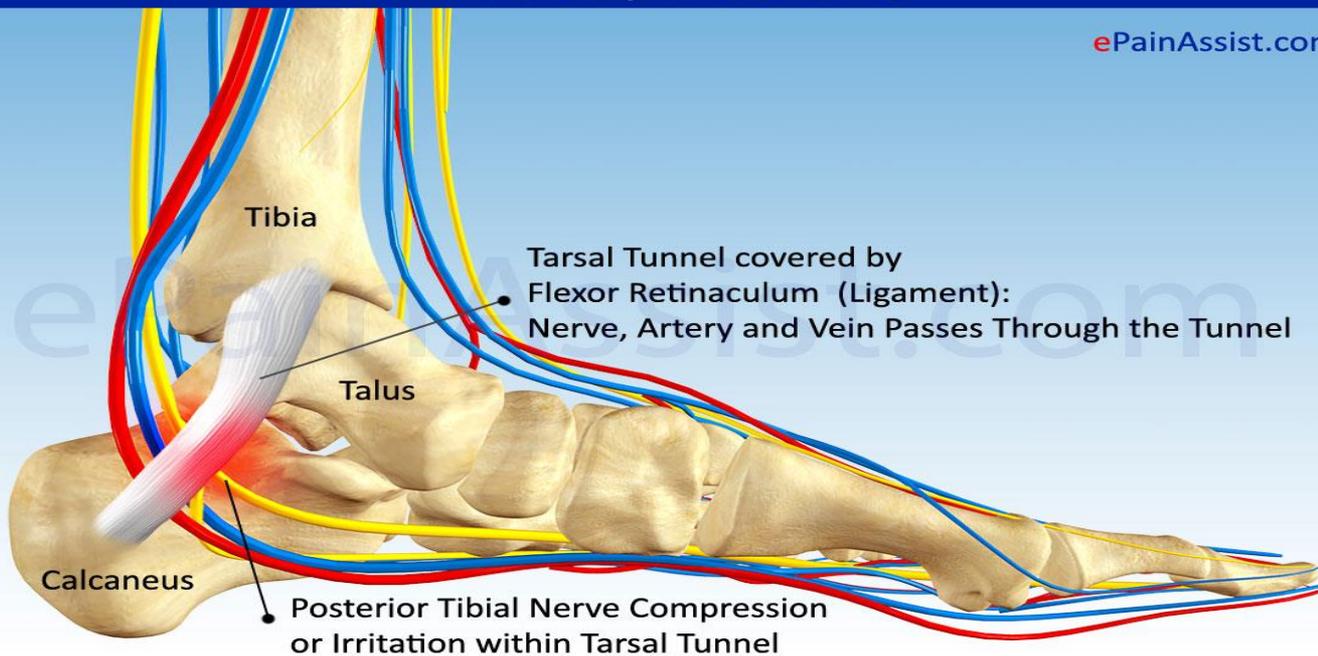
Tarsal tunnel is found under flexor retinaculum

•Symptoms

- Tingling, burning or numbness along the course of the nerve

Tarsal Tunnel Syndrome (TTS)

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Branches of medial and Lateral plantar nerve

	Lateral plantar nerve	Medial plantar nerve
Motor	All muscles of sole of the foot EXCEPT muscles are supplied medial plantar nerve	<ol style="list-style-type: none">1. Abductor hallucis2. Flexor digitorum brevis3. Flexor hallucis brevis4. 1st Lumbricals
Sensory	Lateral 1/3 of sole and lateral one and a half toes	Medial 2/3 of sole and medial three and a half toes

Common Fibular Nerve

Origin :

From Sciatic nerve at the popliteal fossa.

Course :

It descends from the superior to the lateral angle of the popliteal fossa close on the medial border of biceps femoris.

Termination:

It ends at the neck of fibula where it divides into superficial and deep peroneal nerves (Common injury site).

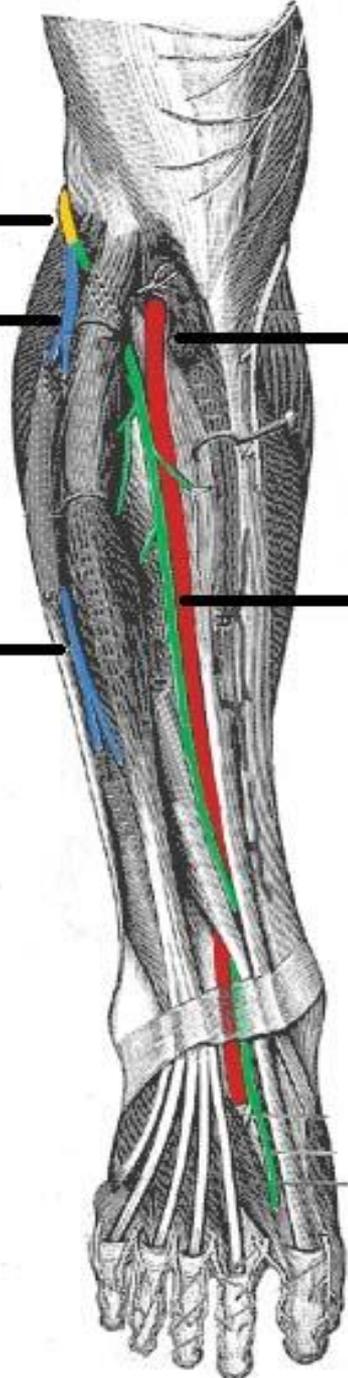
Common fibular nerve

Superficial fibular nerve

Cutaneous branches of the superficial fibular nerve

Tibial artery

Deep fibular nerve



Common Fibular Nerve

Branches

Muscular	Sensory
Short head of biceps femoris.	1-The lateral cutaneous Nerve of the calf: It supplies the skin on the upper 2/3 of the antero-lateral 2-Sural communicating Nerve

Injury of Common Fibular Nerve

Cause : Most common cause is fracture neck fibula

Effect :

Motor

Paralysis of muscles of the anterior compartment and lateral compartment of the leg

Manifestation

- Loss of dorsiflexion at the ankle
- Foot drop
- Loss of eversion
- Inversion of the foot is weakened

Sensory

Sensory loss from :

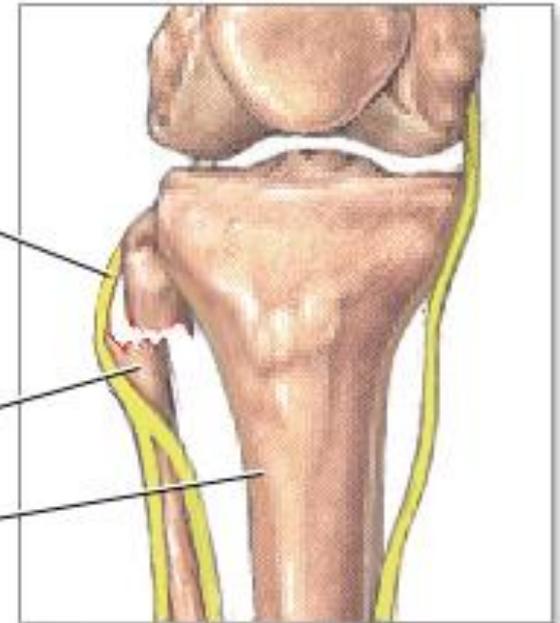
- Anterolateral side of the proximal 2/3 of the leg.
- The dorsum of the toes **EXCEPT** the lateral side of the little toe and small are on the medial side of the dorsum of foot



Common peroneal nerve

Fibula

Tibia



Broken fibula causes damage to peroneal nerve

Deep peroneal nerve

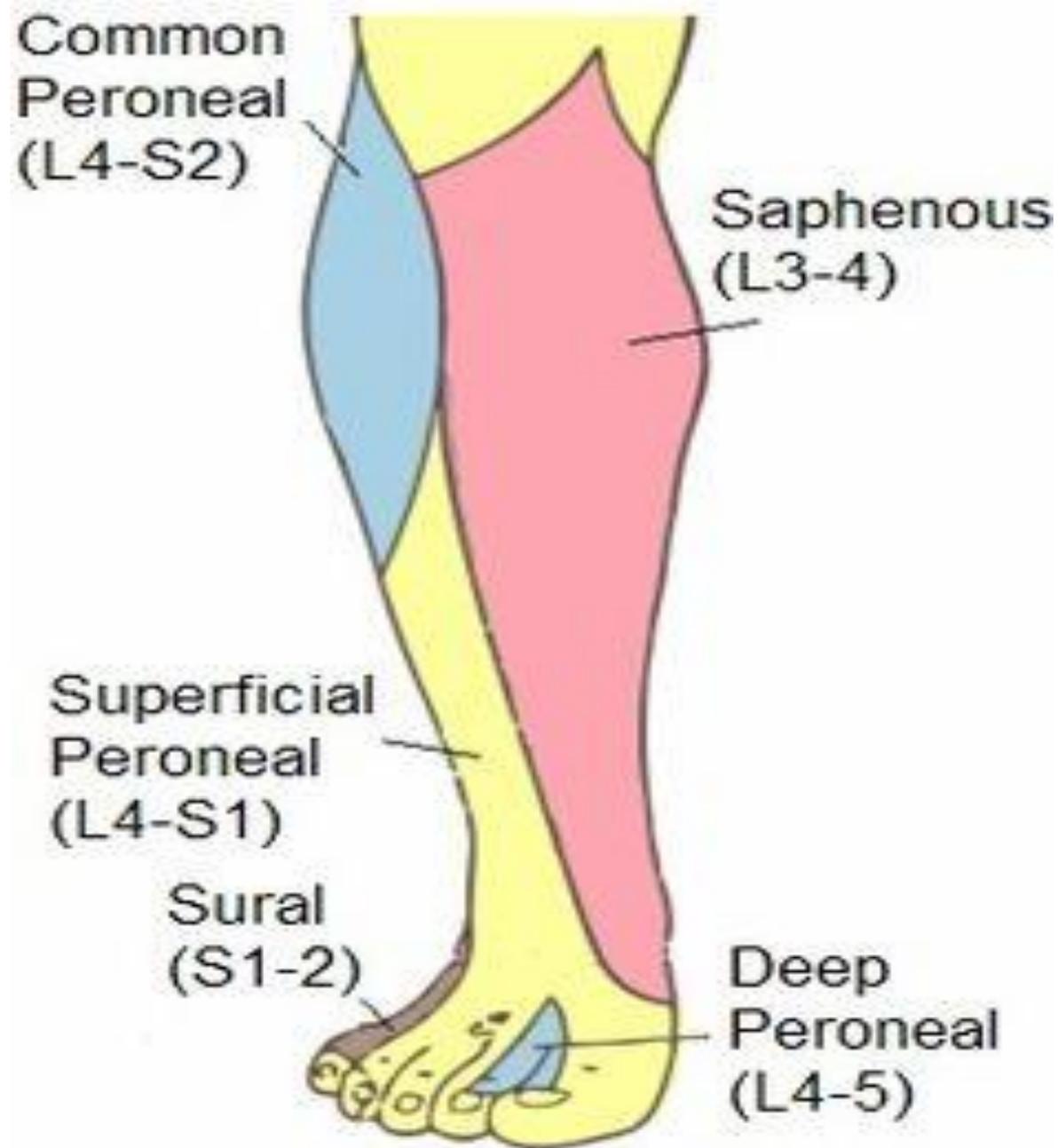
Muscular	Sensory
Muscles of anterior side of leg	Skin between big toe and second at dorsum of the foot

Nerve Injury

Motor	Sensory
<p>Paralysis of muscles of the anterior compartment of the leg</p> <p>Manifestation</p> <ul style="list-style-type: none">-Loss of dorsiflexion at the ankle-Foot drop-Inversion of the foot is weakened	<p><u>Sensory loss from :</u> Between big toe and second at dorsum of the foot</p>

Superficial peroneal nerve

Muscular	Sensory
Muscles of lateral side of leg	a. To the lower 1/3 of anterolateral side of leg. b. To intermediate area of dorsum of foot.



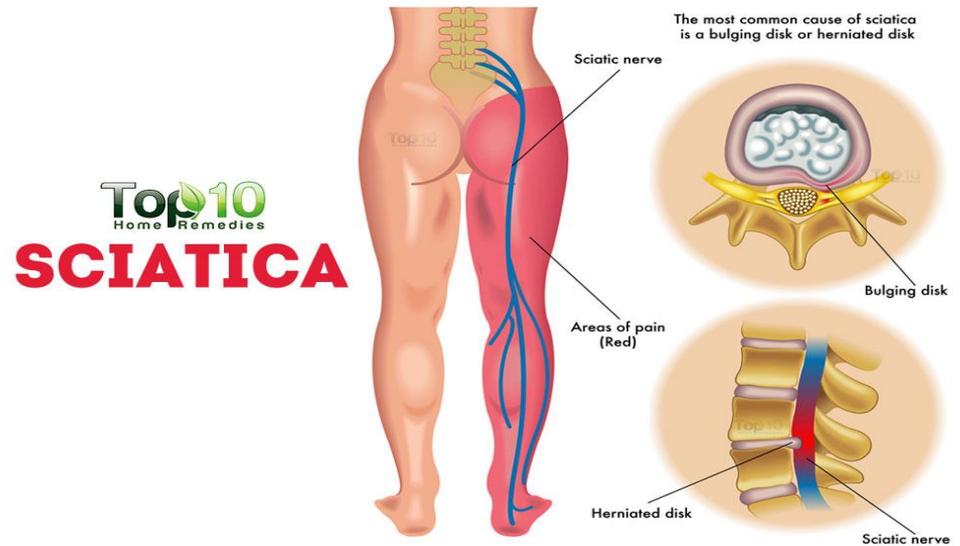
Sciatica

Causes :

Prolapse of an intervertebral disc with pressure of one or more roots of lower lumbar or sacral nerves.

Manifestation:

Pain along the sensory distribution of the sciatic nerve as, posterior aspect of the thigh, the posterior and lateral sides of the leg.



Sciatic nerve Injury

Causes :

1. Fractures of the pelvis
2. Posterior dislocations of the hip joint
3. Wrong intramuscular injections.

Manifestation :

Motor :

- 1-Weak flexion of the knee
- 2-Foot drop

Sensory:

Loss of sensation below the knee, except for a narrow area down the medial side of the leg and the medial border of the foot.

What the difference between injury of sciatic ,common peroneal and deep peroneal nerves ??



Mention Sensory nerve supply

1. medial 2/3 of the sole
2. lateral 1/3 of the sole
3. The heel
4. Skin between big toe and second toe at dorsum of the foot
5. Skin of intermediate part of dorsum of the foot
6. Anterolateral side of the distal 1/3 of the leg
7. lateral border of the foot and the lateral side of the little toe
8. medial border of the foot

What are the deformities resulted from

Injury of Common Fibular nerve

Injury of tibial nerve

Injury of sciatic nerve

Injury of femoral nerve



**Thank
You!!!**

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