

☆ *Anatomy* ☆

*Lumbosacral plexus*

*This Lecture is done by:*

*Samar Shetawe*

*Ahmad Bogari*

## Lumbar Plexus

- From where it's formed ?!
- Ventral (anterior) rami of the upper 4 lumbar spinal nerves (L1,2,3 and L4).
- What are the main branches of lumbar plexus :-
- Iliohypogastric & ilioinguinal: to anterior abdominal wall.
- Obturator: to medial (adductor) group of the thigh.
- Femoral: to anterior group of the thigh
- Where it's located ?!
- Within the substance of the psoas major muscle

## Sacral plexus

- From where it's formed ?
- Ventral (anterior) rami of a part of L4 & whole L5 (lumbosacral trunk) + S1,2,3 and most of S 4.
- Where it's located ?
- in front of the piriformis muscle.

# Femoral nerve

What is the origin of this nerve?

from lumbar plexus (L2,3,4).

Which muscle he is testing?  
Quadrecips Femoris



# Injury of femoral nerve

Paralysis of	Movement affected
Iliacus	Flexion of the hip
Sartorius	Flexion and abduction of the hip
Pectineus	Flexion and adduction of the hip
Quadriceps femoris	Wasting and loss of extension of the knee

**\*Note: Flexion of hip isn't lost, only weakened**  
**-cause (psoas major is intact).**

**-Loss of sensation of the areas supplied by femoral nerve (antero-medial) aspect of thigh & medial side of leg & foot..**

# Sciatic nerve

- MUSCULAR:

To Hamstrings (flexors of knee & extensors of hip).

-To all muscles in the leg & foot:

1) Common peroneal:

Muscles of anterior & lateral compartment of leg (dorsiflexors of ankle, extensors of toes, evertors of the foot).

2) Tibial:

Muscles of posterior compartment of leg & muscles of sole, (plantarflexors of ankle, flexors of toes).

-CUTANEOUS:

To all leg & foot EXCEPT: areas supplied by saphenous (blue), branch of femoral nerve.

# Common peroneal nerve

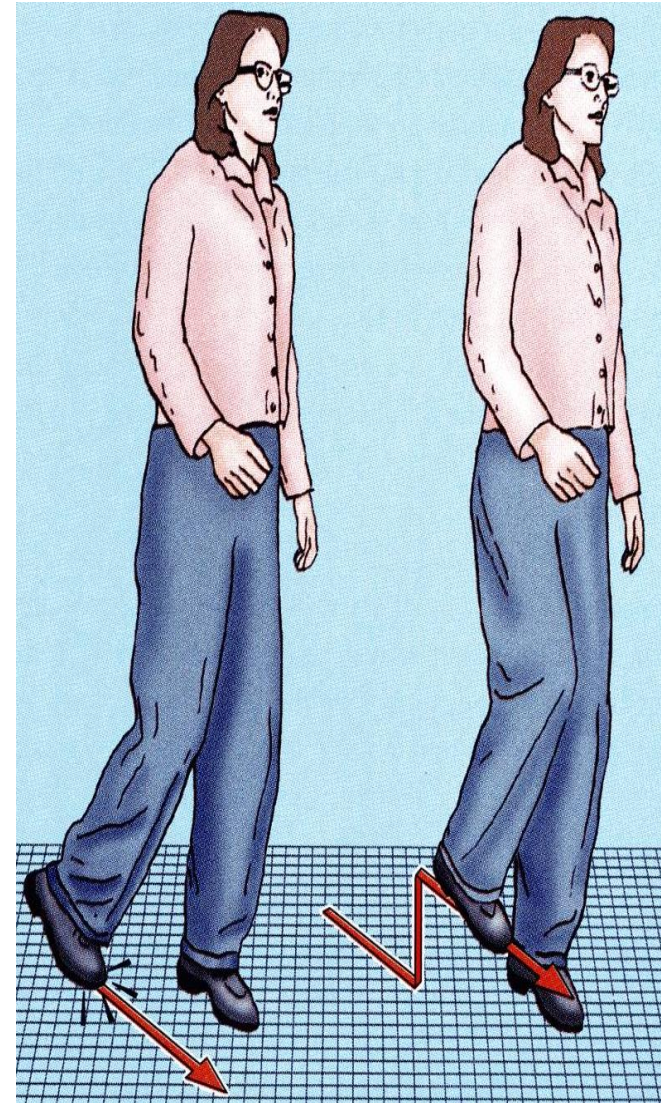
Divides into:

1. Superficial peroneal: descends into lateral compartment of leg
2. Deep peroneal: descends into anterior compartment of leg.



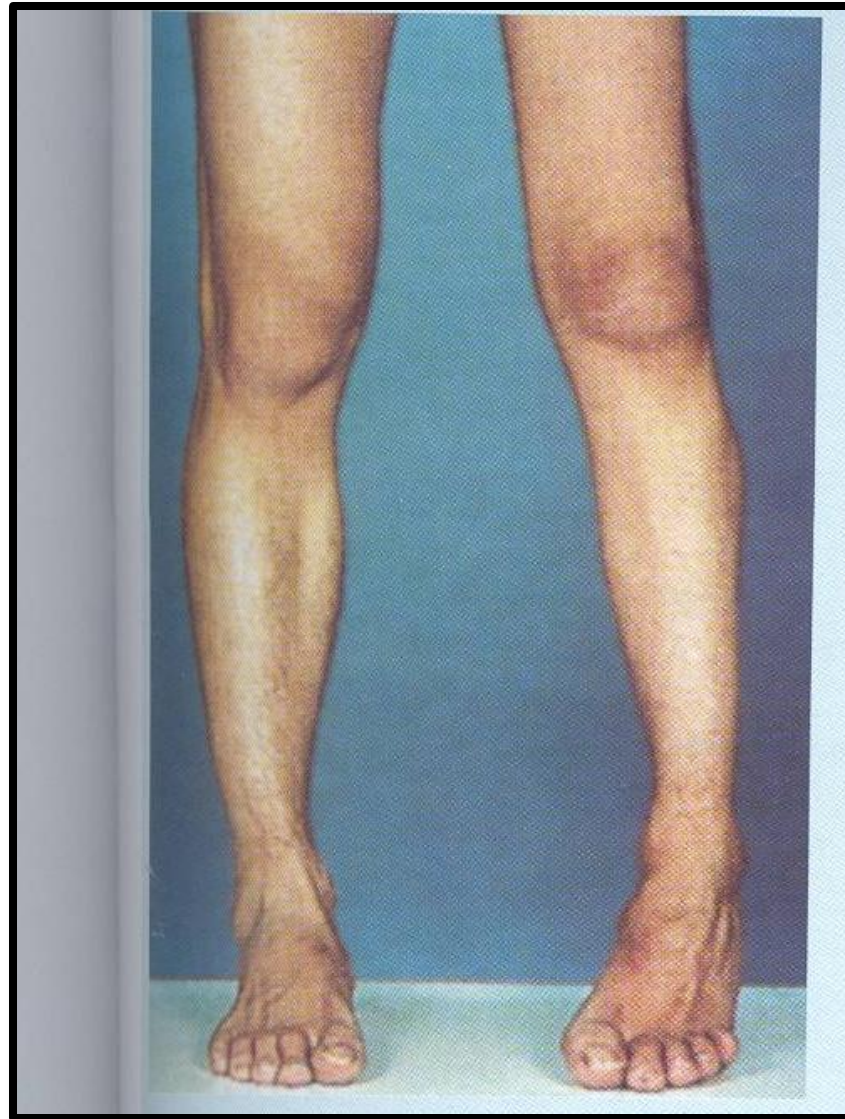
# Sciatic nerve injury will cause :-

- Paralysis of the hamstring muscles but there is weak flexion of the knee is possible because of the action of the sartorius (femoral nerve) and gracilis (obturator nerve).
- All the muscles below the knee are paralyzed.
- Loss of sensation below knee (**EXCEPT** medial side of leg & foot).
- What do we call this deformity in the leg ?!  
plantar-flexed position , or foot drop (**Stamping gate**)



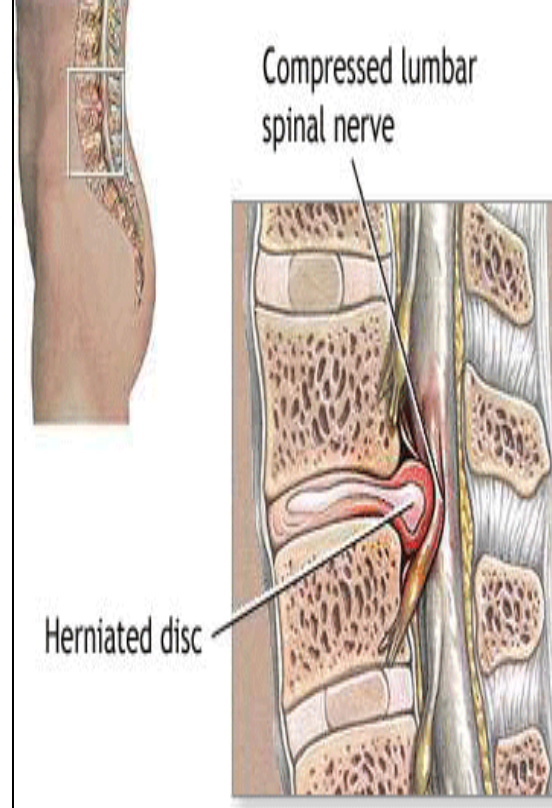


# Sciatic nerve injury



# What do we call this condition ?!

## Sciatica



### Causes of sciatica:-

- Prolapse of an intervertebral disc, with pressure on one or more roots of the lower lumbar and sacral spinal nerves,
- Pressure on the sacral plexus or sciatic nerve by an intrapelvic tumor
- Inflammation of the sciatic nerve or its terminal branches.

**\*Common peroneal  
nerve injury\***



**\*commonly injured in:**

- 1- fractures of the neck of the fibula
- 2- pressure from casts or splints.

\*Common peroneal nerve injury will cause :-

Paralysis of the muscles of the anterior and lateral compartments of the leg.

-What do we call this characteristic deformity in the leg ?!

**(equinovarus)** →

( the foot will be plantar flexed **(Foot drop )** and inverted.



# Tibial nerve injury

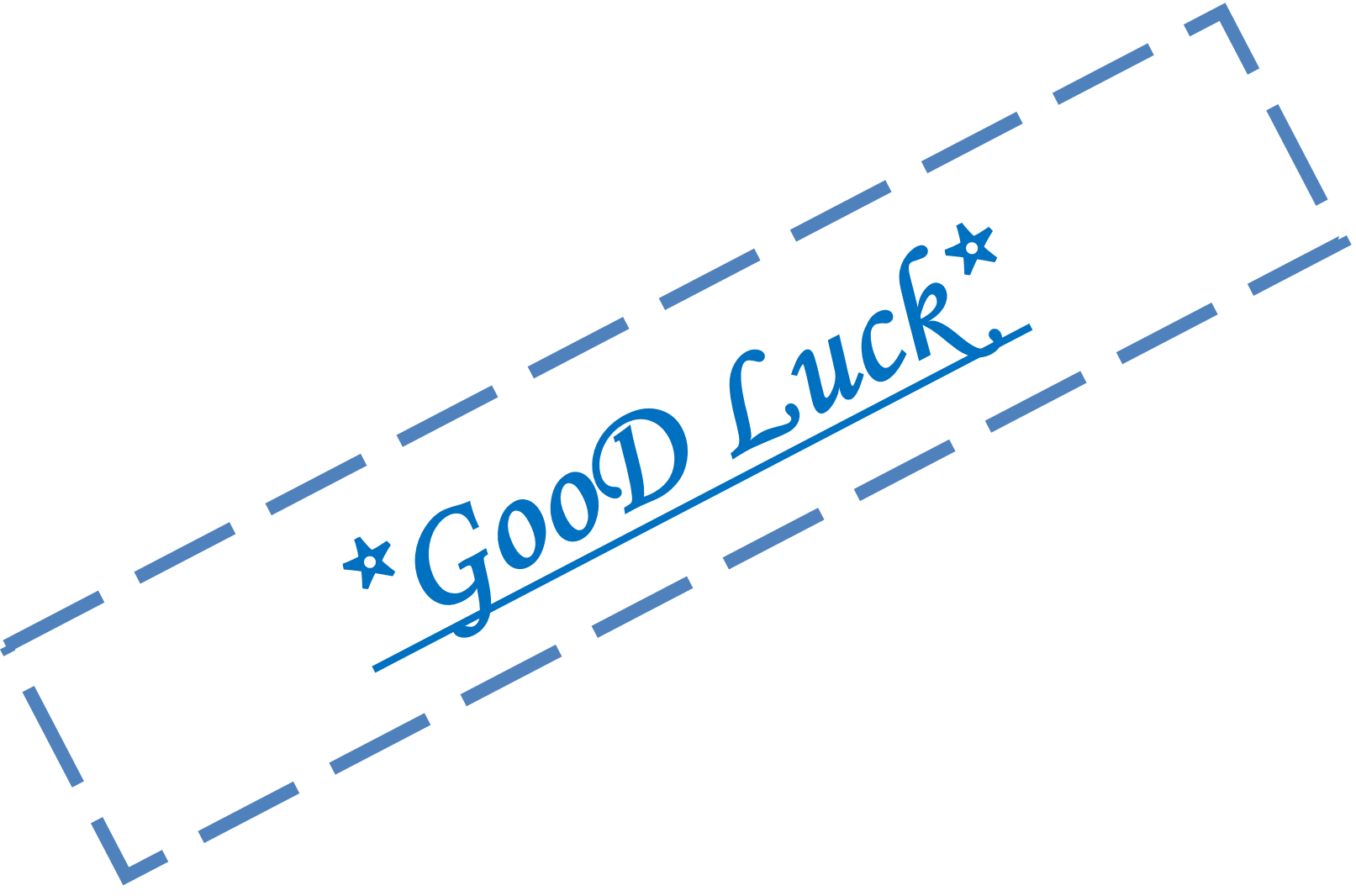
\*Tibial nerve injury will cause :-

Paralysis of the muscles of the back of the leg and the sole of the foot.

-What do we call this characteristic deformity in the leg ?!

**calcaneovalgus** (dorsiflex of the foot at the ankle joint and evert the foot at the subtalar joint)





*\*Good Luck\**