

SCIATIC NERVE—ROOT VALUE, ORIGIN, COURSE, RELATIONS, BRANCHES AND APPLIED ANATOMY (LE)

Origin:

Sciatic nerve arises as a branch from sacral plexus.

It is the thickest nerve of the body.

It is composed of two parts- tibial component and common peroneal component.

Root value:

Tibial component- ventral division of ventral primary rami of L4, L5, S1, S2 and S3.

Common peroneal component: dorsal division of ventral primary rami of L4, L5, S1 and S2.

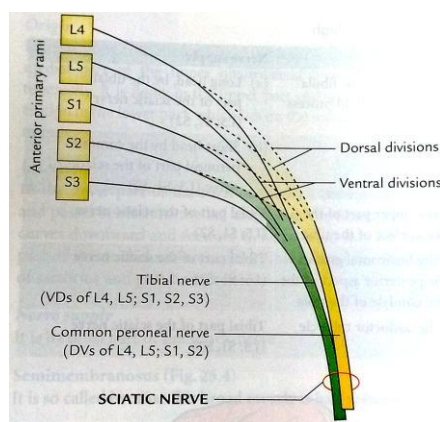


Fig. 25.7 Origin and formation of the sciatic nerve.

Course:

It leaves pelvis by passing through the greater sciatic notch. Enters into gluteal region.

In the gluteal region emerges below the piriformis muscle under cover of gluteus maximus. Extends downwards and enters into posterior compartment of thigh.

At the superior angle of popliteal fossa the nerve terminates by dividing into ;
Tibial nerve and common peroneal nerve.

Relations:

Deep relations-

Body of ischium

Tricipital tendon(tendons of obturator internus, superior and inferior gemelli) Quadratus femoris

Adductor Magnus

Superficial

relations-

Gluteus maximum

Long head of biceps femoris

Branches:

Articular branch supplies hip joint.

Tibial component supplies Hamstring muscles

Common peroneal component supplies short head of biceps femoris

Applied anatomy:

Sciatic nerve may be injured in posterior dislocation of hip joint. Sciatica- shooting pain along the course of sciatic nerve .

It is due to pressure on or irritation of the roots of sciatic nerve.

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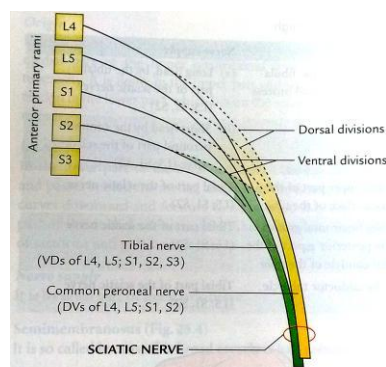


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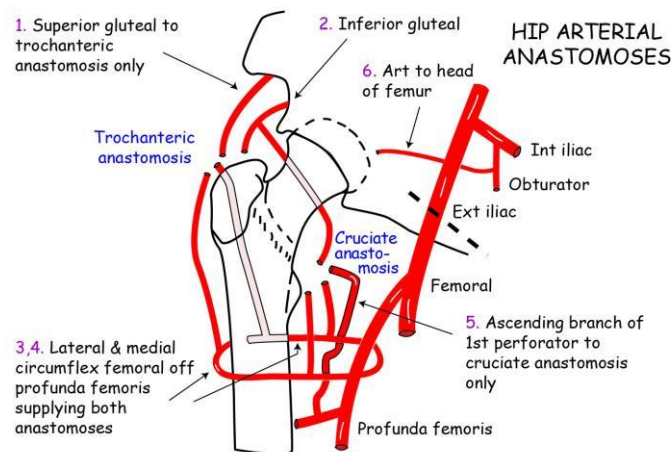
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TROCHANTERIC ANASTOMOSIS (SE)

Trochanteric anastomosis is located in the Trochanteric fossa of the femur.

Following arteries take part in the formation -

- Descending branch of superior gluteal artery
- Descending branch from inferior gluteal artery
- Ascending branch of lateral circumflex femoral artery
- Ascending branch of medial circumflex femoral artery



Function:

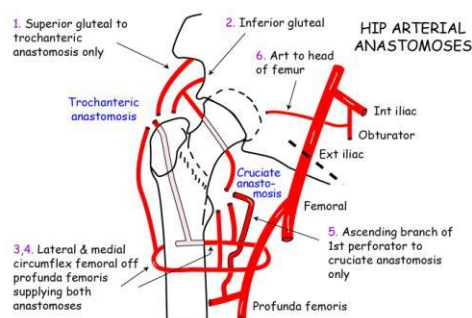
Trochanteric anastomosis provides chief source of blood supply to the head of femur.

CRUCIATE ANASTOMOSIS (SE)

Cruciate anastomosis is located in the interval between,

the upper margin of adductor magnus and lower margin of quadratus femoris. It is located at upper part of back of femur at the level of lesser trochanter. Following arteries take part in the anastomosis -

- Transverse branch of medial circumflex femoral artery
- Transverse branch of lateral circumflex femoral artery
- Descending branch of inferior gluteal artery
- Ascending branch of first perforating artery



This anastomosis is the link between internal iliac artery and Profunda femoris artery. Hence acts like a collateral channel if femoral artery is blocked proximal to Profunda origin.