

The femoral nerve is the largest branch of the lumbar plexus. It arises from the posterior divisions of the ventral rami of L2, L3 and L4. It passes infero-laterally through the substance of psoas major, behind the obturator nerve, to emerge on the lateral border of psoas major in the groove between it and the iliacus muscle, just below the iliac crest and deep to the iliac fascia. Within the abdomen, it gives off branches to iliacus, pectineus and the femoral artery. The nerve (or nerves) to pectineus arises close to the inguinal ligament, passing behind the femoral vessels to the lateral border of the muscle. It descends in the groove passing behind the inguinal ligament to enter the thigh lateral to the femoral artery and femoral sheath, where it splits into anterior and posterior divisions, which supply all of the muscles in the anterior compartment of the thigh.

The anterior division gives rise to the intermediate and medial cutaneous nerves of the thigh and the posterior division gives rise to the saphenous nerve. The posterior division also gives articular branches to the hip and knee joints. A branch to the hip joint arises from the nerve to rectus femoris and branches to the knee joint arise from each of the nerves supplying the vastus muscles with a fourth branch possibly arising from the saphenous nerve.

Supply

The anterior division supplies sartorius and through the intermediate and medial cutaneous nerves of the thigh, the skin of the front and medial side of the thigh. The posterior division supplies quadriceps femoris and through the saphenous nerve, the skin on the medial side of the lower thigh, calf and foot.