

Table 8.7 Sensory, Motor, and Reflex Distributions for the Lumbar and Sacral Plexuses

Nerve root/nerve	Dermatome	Myotome	Reflex
L1	Back, over greater trochanter and groin	Hip flexion (psoas), iliacus, pectineus, sartorius	None
L2	Back, wrapping around to anterior superior thigh and medial thigh above knee	Hip flexion (psoas), hip adductors	(Patellar tendon)
L3	Back, upper gluteal, anterior thigh, medial knee, and lower leg	Knee extension (quadriceps)	Patellar tendon
L4	Medial gluteals, lateral thigh and knee, anterior medial lower leg, dorsomedial aspect of foot and big toe	Ankle dorsiflexion and inversion (anterior tibialis)	Patellar tendon
L5	Lateral knee and upper lateral lower leg, dorsum of foot	Great toe extension (extensor hallucis)	Medial hamstring tendon
S1	Buttock, posterolateral thigh, lateral side and plantar surface of the foot	Ankle plantar flexion (gastrocnemius, soleus), ankle eversion (fibularis muscles), hip extension (gluteals), knee flexion (hamstrings)	Achilles tendon (lateral hamstring tendon)
S2	Buttock, posteromedial thigh, posterior, medial heel	Knee flexion (hamstrings), great toe flexion (flexor hallucis longus)	(Lateral hamstring tendon)
Obturator (L2-L4)	None	Hip adduction (adductor brevis, magnus, longus, gracilis)	None
Femoral (L2-L4)	None	Knee extension (quadriceps, iliacus, pectineus, sartorius)	None
Superior gluteal (L4-S1)	None	Hip abduction (gluteus medius and minimus, tensor fascia)	None
Inferior gluteal (L5-S2)	None	Hip extension (gluteus maximus)	None
Deep fibular (peroneal)	Dorsal web space, between 1st and 2nd digits	Great toe extension (extensor hallucis), toe extension (extensor digitorum longus and brevis) and dorsiflexion (tibialis anterior)	None
Superficial fibular (peroneal)	Lateral lower leg	Ankle eversion (fibularis longus and brevis)	None
Tibial (thigh)	None	Knee flexion (semintendinosus, semi-membranosis, long head biceps femoris)	Hamstring
Tibial (lower leg)	Posterior heel, lateral aspect of ankle and foot (medial sural cutaneous nerve)	Ankle plantar flexion (gastroc, soleus)	Posterior tibialis
Medial plantar	Medial 3 digits	Great toe abduction (abductor hallucis), toe flexion with ankle plantar flexed (flexor hallucis and digitorum brevis)	None
Lateral plantar	5th digit and lateral side, 4th digit	Abduction, 5th digit (abductor digiti mini)	None

From S. Shultz, P. Houglum, and D. Perrin, 2016. *Examination of musculoskeletal injuries*, 4th ed. (Champaign, IL: Human Kinetics).