

Posterior Lower Leg Anatomy

Posterior lower leg anatomy is comprised of the superficial and deep compartments of the posterior lower leg. The superficial compartment makes up the "calf" shape of the leg, and is comprised of the gastrocnemius, plantaris and soleus. The deep compartment is comprised of the popliteus, flexor digitorum longus, flexor hallucis longus and tibialis posterior. Both of these compartments are innervated by the tibial nerve.



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Superficial Compartment

Calcaneal Tendon

Cow-cane Tendon

The calcaneal tendon, also known as the achilles tendon, attaches the plantaris, gastrocnemius and soleus muscles to the calcaneus (heel bone). Clinically, patients can suffer from tendonitis or even tendon rupture at this location.

Superficial Muscles

Super-fish Muscles

The superficial posterior compartment of the leg is comprised of the gastrocnemius, soleus and plantaris. All of these superficial muscles form the "calf" shape of the lower leg and insert into the calcaneal tendon.

Gastrocnemius

Gas-truck

The gastrocnemius is a very powerful, bulging muscle in the posterior leg. It acts to flex the leg at the knee, along with plantarflex the foot at the ankle. It has two heads, which originate at the lateral and medial condyles of the femur, and insert into the calcaneal tendon.

Soleus

Solar-sun

The soleus is a large, powerful muscle in the superficial compartment of the posterior leg. It lies deep to the gastrocnemius, and works to aid walking and running, as its function is to allow plantarflexion at the ankle. This muscle also works to pump venous blood back to the heart from the lower extremities.

Plantaris

Plant

The plantaris is a superficial posterior leg muscle found in the crural compartment. It has a thin belly and long, thin tendon. This muscle works to flex the knee and plantarflex the ankle. It originates at lateral supracondylar line of the femur, inserting in the medial calcaneus. It is absent in 7-10% of the population.

Deep compartment

Deep Muscles

Deep-diver Muscles

The deep posterior compartment of the leg contains four muscles; the popliteus, flexor digitorum longus, tibialis posterior and flexor hallucis longus. These muscles work on the ankle and foot, with exception to the popliteus which acts on the knee.

Popliteus

Pope-light

The popliteus is the only deep fascia posterior leg muscle which works on the knee. It laterally rotates the femur on the tibia, "unlocking" the joint so that flexion can occur (during walking, standing, running).

Tibialis Posterior

Tibetan Post-terrier

The tibialis posterior is located in the deep posterior leg compartment, and is key for leg stability. Its actions are to invert and plantarflex the foot, as well as maintain the medial arch of the foot. It is the deepest of the four muscles in this compartment, and it originates from the interosseous membranes of the tibia and fibula, inserting into the plantar surface of the tarsal bones.

Flexor Digitorum Longus

Flexing Digital-man in Long-johns

The flexor digitorum longus is a thin and pointed muscle which increases in size as it descends. It is located medially, next to the tibia and works to curl (flex) the 2nd, 3rd, 4th, and 5th toes.

Flexor Hallucis Longus

Flexing Halo-Zeus in Long-johns

Another deep posterior leg compartment muscle is the flexor hallucis longus, which is the most powerful of its deep counterparts. It sits on the fibular side of the leg, which is more lateral. This is slightly counterintuitive, as it is opposite of the great toe, which it acts to flex.

Innervation

Tibial Nerve

Tibetan Nerve

The tibial nerve, which is a terminal branch of the sciatic nerve, innervates all of the muscles in the superficial posterior and deep posterior leg compartments.