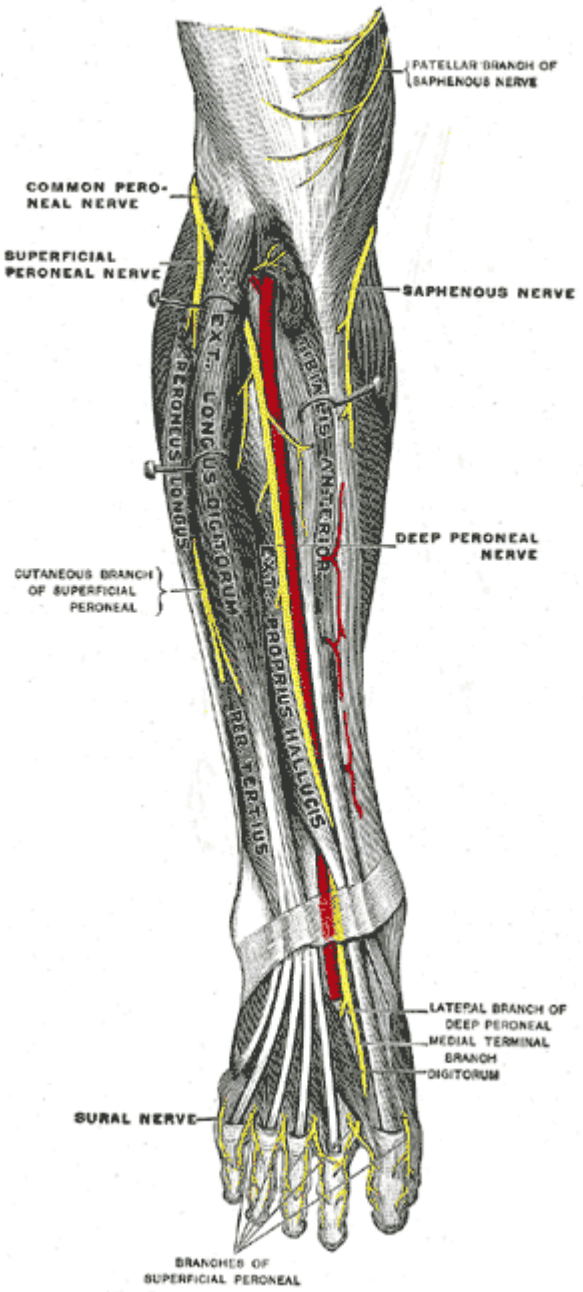
Superficial peroneal nerve

The superficial peroneal nerve or superior fibular nerve, innervates the peroneus longus and peroneus brevis muscles and the skin over the antero-lateral aspect of the leg along with the greater part of the dorsum of the foot (with the exception of the first web space, which is innervated by the deep peroneal nerve).



It passes forward between the peroneus muscles and the extensor digitorum longus, pierces the deep fascia at the lower third of the leg, and finally divides into a medial dorsal cutaneous nerve and an intermediate dorsal cutaneous nerve. In its course between the muscles, the nerve gives off muscular branches to the peroneus longus and peroneus brevis muscles and cutaneous filaments from the integument of the lower part of the leg.

Injury to the nerve can result in an inability to evert the foot and loss of sensation over the dorsum of the foot (with the exception of the first web space between the great toe and the second toe, where the inferior fibular nerve innervates).

Ultrasound is helpful to identify nerve suffering cause. Paolasso et al., report a case of pain at leg associated with burning paresthesia. Ultrasound found tibialis anterior muscle herniation, close to

superficial peroneal nerve. The morphological alteration was supposed to be the cause of symptoms. Neurolysis, based on ultrasonographic findings, allowed symptoms relief [1].

Lower-extremity pain and paresthesia have multiple origins. Early recognition of the symptoms of peripheral nerve entrapment leads to timely treatment and avoids the cost of unnecessary studies. The authors report on a case of superficial peroneal nerve syndrome resulting from nerve herniation through a fascial defect, which was responsive to surgical treatment. This 22-year-old man presented with pain and paresthesias over the lateral aspect of the right calf and the dorsum of the foot without motor weakness. Exercise led to the formation of a tender bulge approximately 12 cm above the lateral malleolus. Percussion of this site worsened his symptoms. Radiography and electromyography studies were nondiagnostic. The patient underwent surgical decompression that involved division of the fascia overlying the nerve and neurolysis of the superficial peroneal nerve. The operation resulted in symptom-free relief. Superficial peroneal nerve syndrome is an entrapment neuropathy that results from mechanical compression of the nerve at or near the point where the nerve pierces the fascia to travel within the subcutaneous tissue. Surgical decompression of the mechanical entrapment usually provides relief from pain and paresthesia [2].

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Paolasso I, Cambise C, Coraci D, Del Tedesco FM, Erra C, Fernandez E, Padua L. Tibialis anterior muscle herniation with superficial peroneal nerve involvement: Ultrasound role for diagnosis and treatment. Clin Neurol Neurosurg. 2016 Oct 6;151:6-8. doi: 10.1016/j.clineuro.2016.09.019. PubMed PMID: 27723505.
2)
Yang LJ, Gala VC, McGillicuddy JE. Superficial peroneal nerve syndrome: an unusual nerve entrapment. Case report. J Neurosurg. 2006 May;104(5):820-3. PubMed PMID: 16703890.