

# **A GROSS ANATOMICAL STUDY TO THE BLOOD SUPPLY OF THE SCIATIC NERVE IN HUMAN**

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## **ABSTRACT**

Identifying the blood supply to the peripheral nerves is important in understanding the pathology of different types of neuropathy, and in selecting the suitable nerves for vascularized nerve grafts. This work was undertaken to study the sources and distribution of the blood supply to the sciatic nerve. Twelve cadavers (10 fresh that included 8 adults and 2 stillborns, and 2 preserved cadavers) were used in the present study. The blood vessels supplying the sciatic nerves were traced to identify their sources and also, the outer sheaths of the dissected sciatic nerves were reflected to study the arrangement and distribution of the feeding blood vessels. The results showed that the inferior gluteal artery gave a branch that divided into an ascending and descending branches to the sciatic nerve. The sciatic nerve also received nutrient branches from the perforators of the profunda femoris artery and from the surrounding muscles. The popliteal artery gave a nutrient artery that ran through the sciatic nerve proximally. All the feeding vessels gave side branches in the outer sheath of the sciatic nerve forming one or two layers of arterial arcades in the epineurium. The outer sheath of the nerve with the arterial arcades inside it formed a mesentery-like structure. The ascending and descending branches of the feeding blood vessels formed a continuous tortuous central artery inside the sciatic nerve. In conclusion, the sciatic nerve received nutrient branches from the inferior gluteal, the perforators of the profunda femoris, the popliteal arteries and from the surrounding muscles. These branches ran in a mesentery-like structure and formed a central tortuous artery.

**Key words:** Sciatic nerve; nutrient arteries; mesentery-like; central tortuous artery.