

Superficial Peroneal Sensory (Antidromic)

Electromyograph Instrument Parameters:

Filter Settings/Frequency Response: 20 Hz - 2,000 Hz
Sweep Speed: 1 - 2 milliseconds/Division
Sensitivity/Gain: 5 - 10 microvolts/Division

Patient Position: (Illustration 15) The patient is positioned in a comfortable, relaxed supine position.

Electrode Placement: (Illustration 15)

Active (Recording) Electrode: The active recording electrode is placed just above the junction of the lateral third of a line connecting the malleoli. This site may also be located at the ankle one fingerbreadth medial to the lateral malleolus.

Reference Electrode: The reference electrode is positioned 3 cm or more distal to and in line with the active electrode.

Ground Electrode: The ground electrode is placed on the crest of the anterior tibia between the active and stimulating electrodes.

Electrostimulation: (Illustration 16)

Percutaneous electrostimulation is performed as follows:

Antidromic surface stimulation is performed not less than 10 cm but not more than 14 cm proximal to the active (recording) electrode, along the anterolateral aspect of the leg, just anterior to the peroneus longus tendon.

TECHNICAL COMMENTS:

The electrostimulation point is proximal to the recording site. The stimulation site is anterior to the peroneus longus muscle and adjacent to the belly of the tibialis anterior muscle between the peroneus longus and extensor digitorum longus tendons. The superficial peroneal sensory nerve may be palpated in this area if a fingernail is rolled over the tendon of the peroneus longus muscle from a posterior to anterior direction. Several trials may be necessary to find the optimal stimulation site. The anterior border of the fibula may be used as an alternative landmark for stimulation.

The patient may be able to detect the response and report it as a "tingling" sensation radiating to the dorsum of the foot.

It may be necessary to use a stimulus of low voltage and short duration to avoid a motor response from adjacent muscles which can obscure the sensory response.

Signal averaging may be necessary to record low amplitude responses.

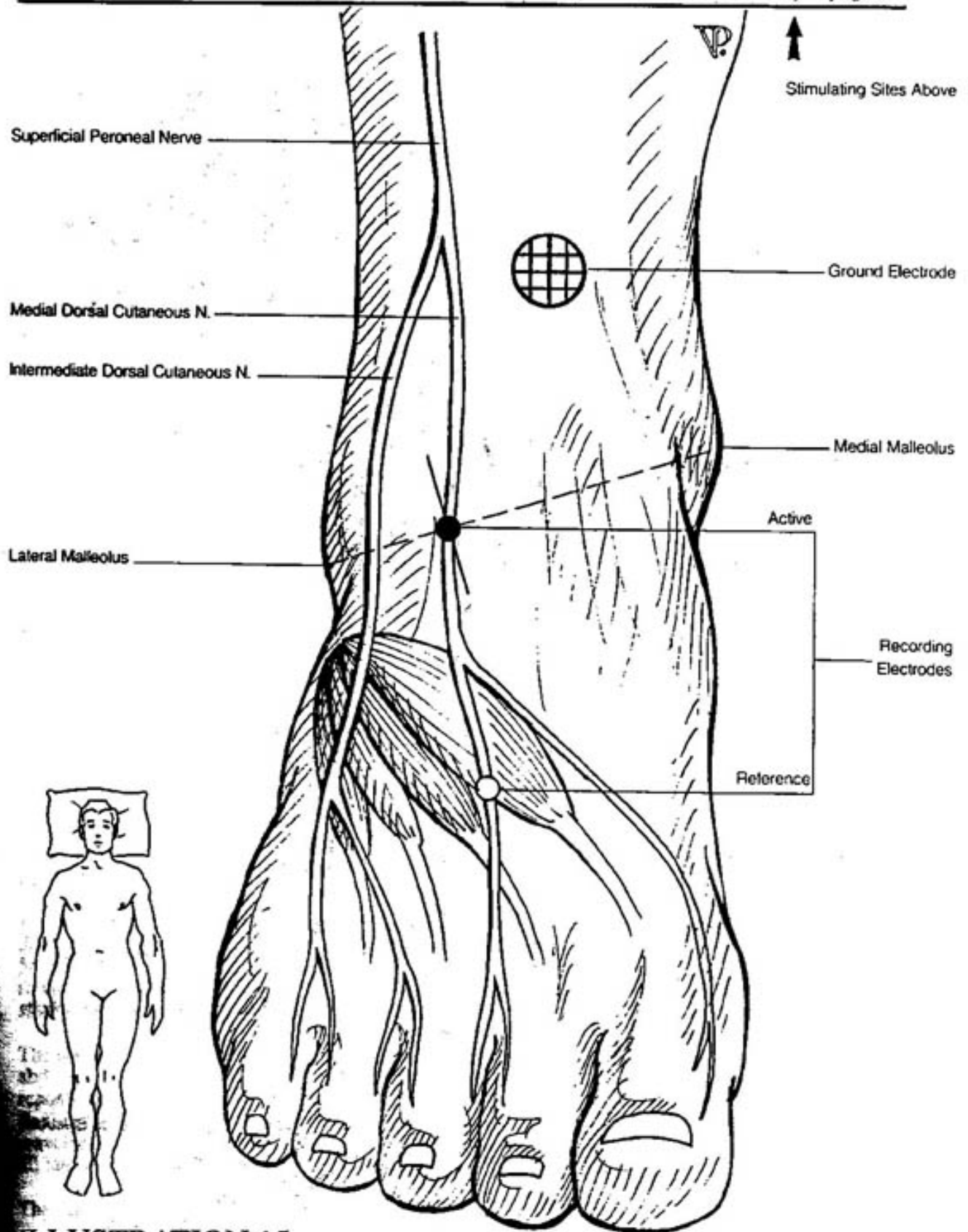


ILLUSTRATION 15

ILLUSTRATION 16

