

**Femoral Motor****Electromyograph Instrument Parameters:**

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

**Patient Position:** (Illustration 12) The patient is positioned supine in a comfortable, "resting" position. The leg is slightly abducted and externally rotated. A pillow may be placed under the knee to maintain this position.

**Electrode Placement:** (Illustration 12)

**Active (Recording) Electrode:** The active recording electrode is placed over the center of the vastus medialis oblique muscle.

**Reference Electrode:** The reference electrode is placed off the muscle on the patella, or medial joint line.

**Ground Electrode:** The ground electrode is placed on the anterior thigh between the stimulating and active electrodes.

**Electrostimulation:** (Illustration 12)

Percutaneous electrostimulation is performed at the appropriate anatomic sites in the following order:

**S1:** Distal stimulation is applied at Hunter's Canal in the medial aspect of the thigh between the quadriceps and adductor muscles. This site is approximately 8-10 cm proximal to the active electrode.

**S2:** Surface stimulation is performed below the inguinal ligament and just lateral to the femoral artery.

**S3:** Surface stimulation is performed above the inguinal ligament and just lateral to the femoral artery.

**TECHNICAL COMMENTS:**

For recording, placement of the active electrode over the most prominent portion of the vastus medialis oblique muscle is most useful in recording the maximum motor response.

The inguinal ligament forms an arc with its convexity pointing downward, extending between the anterior superior iliac spine and the pubic tubercle. Stimulation can be accomplished above and below this ligament, approximately 4-8 cm apart.

It is important to monitor the clinical response and ensure that the quadriceps muscle group is responding to the stimulus and that patellar movement is evident.

Conduction velocities should be calculated across the long segments; i.e., below inguinal ligament to Hunter's Canal and above inguinal ligament to Hunter's Canal.

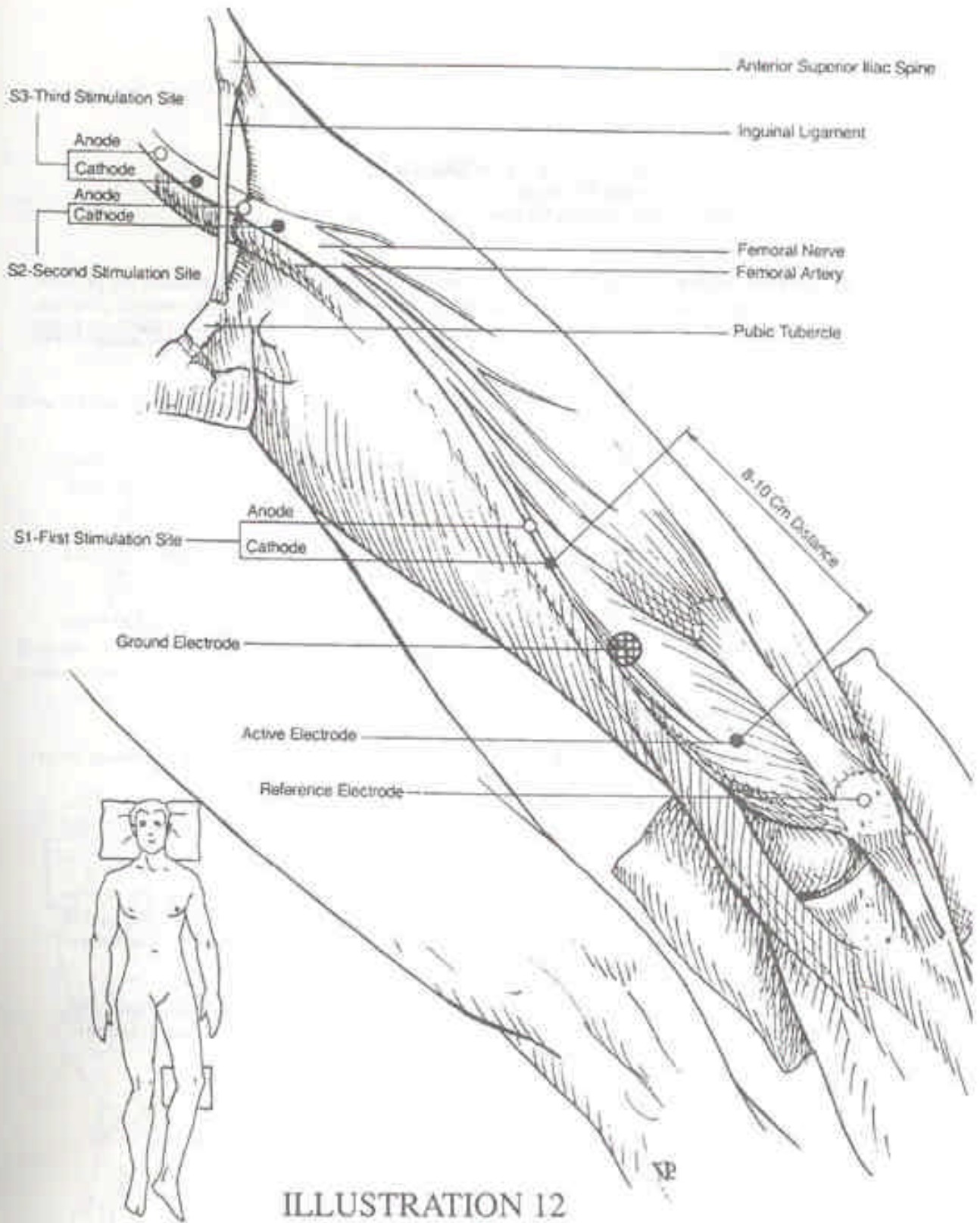


ILLUSTRATION 12