Lesions of the Lumbar Plexus

See **Fig. 3.27**.

Lesions of the lumbar plexus are also usually incomplete. However, for the purpose of this discussion, a complete lesion is described.

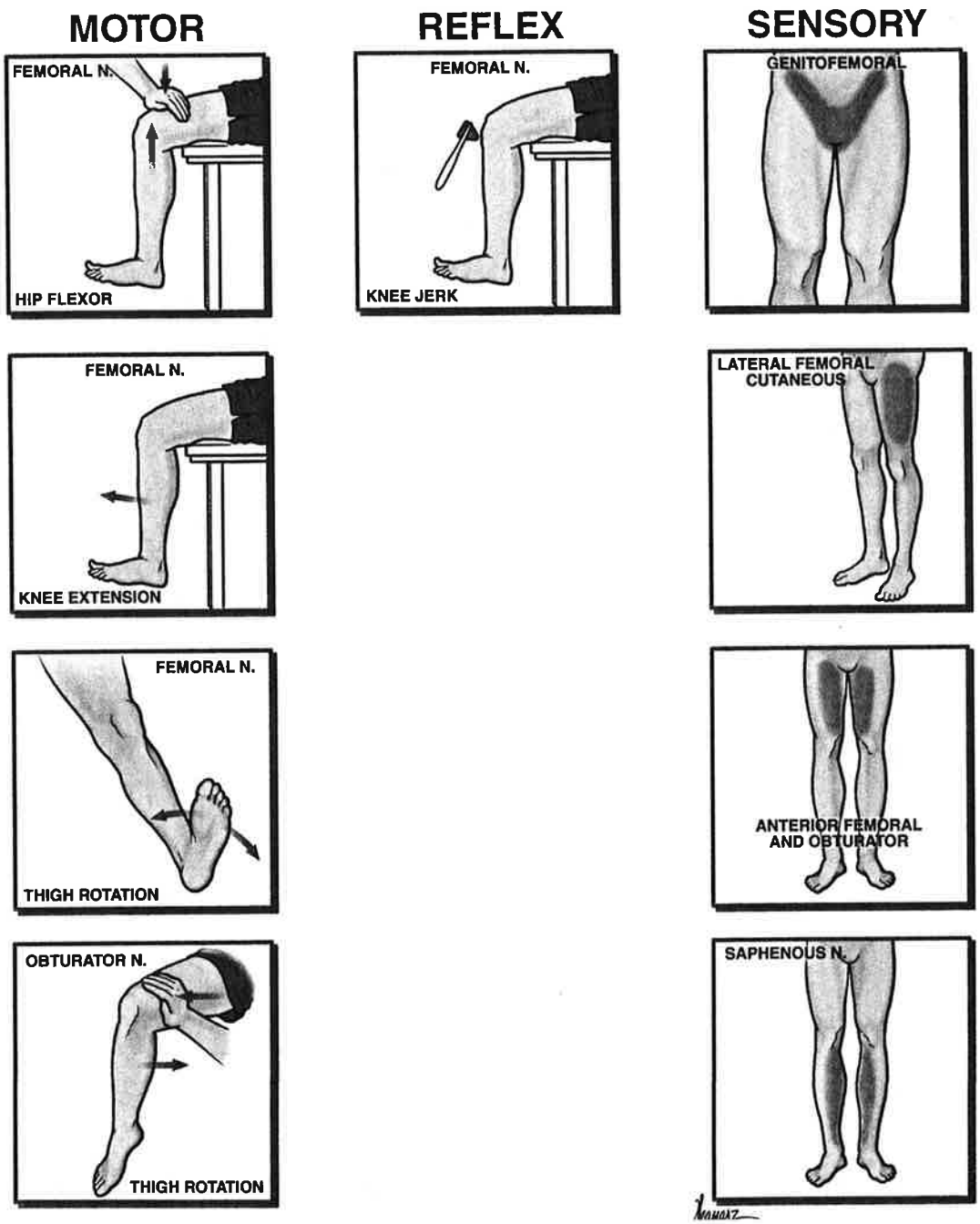
Motor signs are limited to the muscles supplied by the femoral and obturator nerves. As a result of *femoral nerve* (L2–L4) involvement, signs of weakness are present in hip flexion (iliopsoas), leg extension (quadriceps), and thigh rotation (sartorius). As a result of *obturator nerve* (L2–L4) involvement, thigh adduction (adductor muscles) is also impaired.

Sensory loss may include all or part of the following areas:

1. The inguinal region and the genitalia (iliohypogastric, ilioinguinal, and *genitofemoral* nerves)
2. The lateral thigh (*lateral femoral cutaneous nerve*)
3. The anterior and medial thigh (*femoral* and *obturator nerves*)
4. The medial leg and foot (*saphenous nerve*, a branch of the femoral nerve)

Finally, the patellar reflex (femoral nerve) and the cremasteric reflex (genitofemoral nerve) may be absent or depressed.

Fig. 3.27 **Neurologic tests for lumbar plexus lesion.**



Lesions of the Sacral Plexus

See **Fig. 3.28**.

Lesions of the sacral plexus are usually incomplete. A complete lesion may be characterized as follows.

The motor signs of a sacral plexus lesion reflect the involvement of the muscles supplied by the gluteal nerves and the sciatic nerve and its branches. Thus, the syndrome is characterized by weakness in the following muscles: (1) the abductors and internal rotators of the thigh (*superior gluteal nerve*), (2) the hip extensors (*inferior gluteal nerve*), (3) the knee flexors (*sciatic nerve*), and (4) all of the muscles of the leg and foot (sciatic nerve and its branches).

The sensory signs of a sacral plexus lesion include sensory loss of the posterior thigh and most of the leg and foot (except for their medial aspects).

The Achilles reflex (S1) may be absent or depressed as a result of sciatic nerve involvement.

Bowel and bladder control is frequently compromised as a result of *pudendal nerve* involvement.

Fig. 3.28 **Neurologic tests for sacral plexus lesion.**