

# Femoral Nerve Block: Anatomy & Placement

**Anesthetic Pearls:** Anesthetic Implications, Anatomy, and Placement of the Femoral Nerve Block

## Femoral Nerve Anatomy:

- L2-L4 nerve roots exit from the lumbar plexus and pass between the psoas major and iliac muscles
- Enters the thigh and groin deep to inguinal ligament
- Anterior to iliopsoas muscle and lateral to the femoral artery
- Fascia lata and fascia iliaca are superficial
- Lateral to medial at inguinal ligament: nerve, artery, vein, extra space, lymphatics (NAVEL).

## Femoral “3-in-1” Nerve Block:

- Lumbar plexus block ?
- Blockade of Lateral Femoral Cutaneous, Femoral, and Obturator nerves
- Efficacy of the block depends on proximal spread of local anesthetic within the sheath toward nerve roots

## Femoral Nerve Block Technique:

1. Identify Inguinal Ligament
2. Palpate Femoral Artery
3. Needle insertion approximately 1 cm lateral to artery (always aspirate before injection because of obvious risk of intravascular injection).
4. Paresthesia obtained in awake patients
5. Ultrasound guidance has made the block anatomically easier to place.
6. Nerve stimulation makes needle positioning easier to verify (elicit good patellar "snap" at current  $\sim 0.5 - 0.7$  mA).
7. Gently hydro-dissect to properly show the Femoral nerve bundle (and place catheter)
8. Inject volume adjusted dose of local anesthetic around the Femoral nerve (Bupivacaine, Ropivacaine, Lidocaine)

