## Lower Extremity Nerve Blocks

### Femoral Nerve Block

**Indications:** Surgery on femur, anterior thigh and knee, popliteal, quadriceps tendon repair.

**Analysis for hip and femur fractures.**

**Patient position:** Supine

**Transducer:** Linear

**Needle:** 22G, 6-10cm short needle

**Common EMR obtained:** Quadriceps muscle contraction.

**LA:** 10-20 ml

### Initial transducer placement:

- Femoral crease, parallel to and inferior to inguinal ligament, must find the common FA.

- **Initial depth setting:** 4 cm.

### Landmarks:

- **Common femoral artery and fascia iliaca (arrows):**
- **Ideal view:** Femoral nerve lateral to femoral artery, below fascia iliaca, above departure of profunda femoris artery.

### Decrease gain at this point:

- **Ideal spread of LA:** Under the fascia iliaca around the femoral nerve.

- **Number of injections:** One SORe.

### Sciatic Nerve Block

### Saphenous Nerve Block

**Indications:** Analgesia for knee surgery as a component of multimodal analgesia. In combination with sciatic nerve blocks, for surgery below the knee.

**Patient position:** Supine with leg abducted and externally rotated.

**Transducer:** Linear

**Needle:** 22G, 6-10cm short needle

**Common EMR obtained:** If used.

**LA:** 15-18 ml

### Initial transducer placement:

- Transverse view at medial aspect of lower thigh to mid-lower level.

- **Initial depth setting:** 4 cm.

### Landmarks:

- **Saphenous nerve and femoral artery:**
- **Ideal view:** Femoral artery in the subcutaneous plane at the medial edge of the vastus medialis.

### Technique:

- Needle insertion in plane, lateral to medial, alternatively out of plane.

- **Ideal spread of LA:** In the fascial plane (arrows) underneath sartorius muscle on both sides of the artery.

- **Number of injections:** One SORe.

### Sciatic Nerve Block

### Subgluteal Level

**Indications:** Analgesia and analgesia for surgery below the knee.

**Patient position:** Prone, lateral or oblique (preferred).

**Transducer:** Linear or curved in larger patients

**Needle:** 22G, 12-15cm short needle

**Common EMR obtained:** Twitch of calf or foot

**LA:** 15-20 ml

### Initial transducer placement:

- Gastrocnemius, popliteal fossa, below hamstring.

- **Ideal view:** Popliteal nerve in common connective tissue sheath (intermuscular tunnel).

### Landmarks:

- **Sciatic nerve:**
- **Ideal view:** Popliteal nerve with TN and CPN slightly diverged within common connective tissue sheath of SN (arrows).

- **Note:** This image demonstrates separation of TN and CPN after successful injection.

### Technique:

- Needle insertion in plane, lateral to medial, alternatively out of plane.

- **Ideal spread of LA:** Round the nerve, within the common connective tissue sheath.

- **Number of injections:** One SORe.

### Sciatic Nerve Block

### Popliteal Level

**Indications:** Analgesia and analgesia for surgery below the knee.

**Patient position:** Prone, oblique (preferred) or supine with the knee flexed.

**Transducer:** Linear or curved in larger patients

**Needle:** 22G, 12-15cm short needle

**Common EMR obtained:** Twitch of calf, foot or toes

**LA:** 15-20 ml

### Initial transducer placement:

- Transverse, 4-5 cm above the popliteal crease.

- **Initial depth setting:** 4-5 cm.

### Landmarks:

- **Popliteal nerve:**
- **Ideal view:** Sciatic nerve with TN and CPN slightly diverged within common connective tissue sheath of SN (arrows). Note: This image demonstrates separation of TN and CPN after successful injection.

### Technique:

- Needle insertion in plane, lateral to medial, or out of plane.

- **Ideal spread of LA:** Round between and around TN and CPN.

- **Number of injections:** One SORe.