**Femoral Nerve Block**

**Indications:** Surgery on femur, anterior thigh, and knee

**Transducer Placement:** Supine

**Ultrasound Imaging:** Transducer: 12-14 MHz linear array

**Cross-sectional Anatomy:** Transverse view at the level of the inguinal ligament

**Initial depth setting:** 4 cm

**Local Anesthetic (LA):** 10-25 ml

**Key Anatomy:** Femoral nerve lateral to femoral artery, below fascia lata

**Transducer Placement:** Trunk scan proximally, then scan distally

**Needle:** 21 G 10 cm short bevel needle

**Nerve stimulation response:** Twitch of foot or calf

**Patient Position:** Prone, lateral or oblique (shown)

**Top:** When FA is not seen, track fascia lata medially towards FA to identify FA

**Tips:**
- Significant amount of transducer pressure may be required
- Ultrasound anatomy shown can be used as a reference for both transgluteal and subgluteal techniques

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**Sciatic Nerve Block (Subgluteal level)**

**Indications:** Surgery at and below the knee

**Transducer Placement:** Prone, oblique (shown)

**Ultrasound Imaging:** Transducer: 5-12 MHz linear array

**Cross-sectional Anatomy:** Transverse view at the base of the popliteal fossa

**Initial depth setting:** 4 cm

**Local Anesthetic (LA):** 10-25 ml

**Key Anatomy:** Popliteal artery, sciatic nerve superficial and lateral to it, femoral epineural sheath of Scarpa. Note: Grey arrows indicate common epineural sheaths

**Transducer Placement:** Trunk scan proximally, then scan distally

**Needle:** 21 G 10 cm short bevel needle

**Nerve stimulation response:** Twitch of foot or calf

**Patient Position:** Prone, lateral or oblique (shown)

**Top:** Needles should enter the sheath of the Scarpa's fascia laterally or medially

**Tips:**
- Nerve stimulation response: Twitch of foot or calf
- Needle insertion: In plane, lateral to medial
- Significant amount of transducer pressure may be required
- Ultrasound anatomy shown can be used as a reference for both transgluteal and subgluteal techniques

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**Popliteal Block**

**Indications:** Surgery on ankle, achilles tendon, and foot

**Transducer Placement:** Supine with leg abducted and externally rotated

**Ultrasound Imaging:** Transducer: 5-12 MHz linear array

**Cross-sectional Anatomy:** Transverse view in the lateral aspect of the lower leg

**Initial depth setting:** 2 cm

**Local Anesthetic (LA):** 10-25 ml

**Ideal view:** Arttery below the tibialis muscle

**Transducer Placement:** Trunk scan proximally, then scan distally

**Needle:** 22 G 7 cm bevel needle

**Nerve stimulation response:** Twitch of foot or calf

**Patient Position:** Prone, lateral or oblique (shown)

**Top:** After injection, scan proximally and distally to assure the LA spread

**Tips:**
- Needle insertion: In plane, lateral to medial
- Quadriceps muscle contraction: Nerve stimulation response
- Significant amount of transducer pressure may be required
- Ultrasound anatomy shown can be used as a reference for both transgluteal and subgluteal techniques

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**Saphenous Nerve Block**

**Indications:** Supplement to popliteal or sciatic blocks for surgery below the knee

**Transducer Placement:** Supine with leg abducted and externally rotated

**Ultrasound Imaging:** Transducer: 12-14 MHz linear array

**Cross-sectional Anatomy:** Transverse view in the medial aspect of the lower leg

**Initial depth setting:** 2 cm

**Local Anesthetic (LA):** 10-25 ml

**Ideal view:** Saphenous nerve superficial to common peroneal nerve

**Transducer Placement:** Trunk scan proximally, then scan distally

**Needle:** 22 G 5-8 cm short bevel needle

**Nerve stimulation response:** Twitch of foot or calf

**Patient Position:** Supine with leg abducted and externally rotated

**Top:** Significant amount of transducer pressure may be required

**Tips:**
- Significant amount of transducer pressure may be required
- Ultrasound anatomy shown can be used as a reference for both transgluteal and subgluteal techniques

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**Suggested Standard Monitoring For Nerve Blocks**

Combined Monitoring: Ultrasound + Nerve Stimulation + Resistance to Injection

**TREATMENT OF LOCAL ANESTHETIC TOXICITY**

1. Airway, hyperventilation, 100% O2
2. Intravenous lidocaine, diazepam, phenol
3. Intravenous fluids, mannitol, furosemide

**Tips:**
- When localisation of FA proves difficult, scan more proximally and trace FA to mid thigh
- Note: Grey arrows indicate common epineural sheaths

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**DOCUMENTATION AND MONITORING CHECKLIST**

- Patient consent obtained
- Lately fired checklist
- Resuscitation equipment present
- Patient monitoring applied (HR, BP, Pulse Oximetry)
- Skin debridement
- Premedication administered
- Vascular access
- Intravenous fluids
- Inhalation/Intravenous sedation
- Injection monitoring
- Motor response at 0.5 mA: NO, YES
- Motor response at 5.0 mA: YES, NO
- High resistance to injection: NO, YES
- Injection pressure (if monitored): YES
- Paresthesia on injection: NO, YES
- Aspiration before injection: NO, YES

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**Cross-sectional Anatomy**