

NWH EMERGENCY MEDICINE NERVE BLOCK CHECKLIST

print this checklist at nwhed.org/block-checklist

Indications:

- Femoral neck fractures
- Intertrochanteric fractures
- Femoral shaft fractures

Absolute Contraindications

- Patient refusal
- Allergy to local anesthetic
- Overlying infection of the skin
- Prior vascular surgery to inguinal region
- Clinical signs of femoral nerve or vascular injury (abnormal neurovascular exam)
- Open fracture
- High risk for compartment syndrome

Relative Contraindications

- Anticoagulant/Antiplatelet therapy
- Clotting disorders (Plt <80,000; INR > 1.7)
- Intoxicated patients
- Hardware at or near planned injection site

Preparation:

- Use meditech ED [nerve block order set](#)
- Ensure a [signed consent](#) is scanned into meditech
- Review if needed: nwhed.org/nerve-blocks
- Confirm Intralipid is available in Pyxis
- Place patient on cardiac monitor
- Bring to bedside the ultrasound machine with linear transducer
- Bring from procedure cart a universal block tray
- Bring from procedure cart a StimuQuick Echo block needle
- Bring from RN/Pyxis the block anesthetic - *Ropivacaine preferred.

Drug	Dose	50 kg	70 kg	90 kg / Max
Ropivacaine 0.5%* (5 mg/mL)	2 mg/kg	100 mg (20 mL)	140 mg (28 mL)	175 mg (35 mL)
Bupivacaine 0.5% (5 mg/mL)	3 mg/kg	150 mg (30 mL)	140 mg (40 mL)	175 mg (40 mL)

Procedure

- Perform "Time Out"
- Prep skin with povidone-iodine or chlorhexidine
- Anesthetize puncture site with lidocaine
- Place the nerve block under ultrasound guidance.

Post-Procedure

- Document procedure in Meditech (quicktext: [usnerveblock](#))
- Maintain vigilance for Local Anesthetic Systemic Toxicity (LAST)

LOCAL ANESTHETIC SYSTEMIC TOXICITY (LAST)

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INCIDENCE

Very rare (about 1 in 1000 major events) which you must be aware of if you are performing nerve blocks. In the past the most common cause was due to intravascular injection of anesthetic. But safety measures including use of ultrasound have decreased the incidence of these events and we now have a treatment - Intralipid.

SYMPTOMS

Initial symptoms: when seen shortly after injection CNS excitation symptoms of LAST include: tinnitus, perioral numbness, metallic taste, agitation, visual changes, muscle twitching, and ultimately, seizure.

CNS depression: follow excitation: somnolence coma and respiratory depression.

Cardiovascular: can occur in isolation, but usually occur with CNS symptoms above.

- Bradycardia or Tachycardia, Hypotension or Hypertension
- Dysrhythmia, shock or Cardiac arrest

TREATMENT

- INTRALIPID (20%)
 - Immediately give a 1.5 mL/kg bolus followed by a 0.25 mL/kg/min infusion.
 - Repeat bolus for persistent cardiovascular collapse
 - Double infusion rate to 0.5mL/kg/min if blood pressure remains low.
 - Continue infusion for 10 minutes after attaining circulatory stability
 - Maximum dose 10mL/kg in the first 30 minutes.
 - Intralipid is a lipid emulsion which has multiple salutary effects including shuttling the anesthetic away from the brain and heart to organs that store and detoxify the drug.
- Manage Airway
 - 100% oxygen by non-rebreathing, consider intubation
- Manage Circulation
 - Hypotension: IV fluid bolus & vasopressors.
 - Seizure: use midazolam 1-2 mg IV
 - Dysrhythmia/Arrest: ACLS algorithm
 - Favor Amiodarone for arrhythmias; avoid beta blockers, calcium channel blockers and lidocaine.
 - Decrease dose of epinephrine to <1 mcg/kg

POST-PROCEDURE NURSING PROTOCOL

- Vital signs every 10 minutes x 30 minutes
- Assess neurovascular status of limb including: color, temp, cap refill, pain and sensation Q15 mins for at least 30 mins
- Ensure limb is maintained in a neutral position to prevent injury
- Fall precautions