

## Checklist for Ultrasound Guided Nerve Blocks

1. Must be supervised by attending unless approved for indirect supervision.
2. Complete the written informed consent form with below information.
  - a. Signed by supervising attending.
  - b. Benefits: better pain control, use less narcotics, and possible shorter hospital stay.
  - c. Risks (< 1%): Nerve injury (short term up to permanent), bleeding, infection, seizure, and arrhythmia. (Last 2 less than .01%<sup>e</sup>)
  - d. Relative contra-indications. Have shared decision making discussion with the patient.
    - i. Suspected nerve injury: tingling, numb or weak
    - ii. Coagulopathy: Discuss increased bleeding risk (mitigated by US) for planar blocks if on coumadin, platelet inhibitor, DOAC or is thrombocytopenic.
  - e. Contra-indications (absolute):
    - i. Infection overlying injection site
    - ii. Patient refusal
    - iii. Known allergy to both amides and esters
3. Orthopedic notification timing
  - a. Contact after procedure: shoulder dislocation, clavicle fracture, proximal humerus fracture, low energy distal radius fracture, hand and digit injuries, hip fracture and dislocation\*, low energy foot and ankle fractures, rib fractures.
  - b. Contact and obtain their consent pre-procedure: humeral shaft fracture, elbow fracture, both bone forearm fracture, femoral shaft fracture
  - c. **NEVER BLOCK** (high risk compartment syndrome): tibial fracture, high energy forearm fracture, high energy foot fracture, existence of neurovascular injury
  - d. \*Contact orthopedics before block if using Exparel for hip fractures.
4. Preparation before performing the block
  - a. Document no intact neuro-vascular status and soft compartments
  - b. Document no allergies to esters and amides
  - c. Perform time out to confirm correct indication, patient and side
  - d. Confirm intralipid availability (on-call) with pharm
5. Assemble medication and equipment
  - a. Order anesthetic after calculating and documenting maximum dosage.
    - i. Ropivacaine 0.2% for long acting, large volume blocks.
    - ii. 2-Chloroprocaine 3% for short blocks, e.g. dislocation reductions.
    - iii. Lido 1% with epinephrine for medium blocks, e.g. fracture reductions.
  - b. Prep with chlorhexidine and use sterile gel.
  - c. Cardiac monitoring if clinically considered at risk for arrhythmias.
  - d. Use linear probe, "Nerve" and "Steep Needle Profiling" under "More Controls".
    - i. Ensure target nerve is in green outline. Select "Left" or "Right".
    - ii. Select "Shallow", "Medium" or "Steep" to best line up needle to be perpendicular to the dotted line traversing the image.

iii. Shallow < 30°, Medium 30-40°, Steep 40-50° (needle >50° negates)

6. Perform procedure

- a. Refer to PV card from ALIEM (web resource) on local anesthetic systemic toxicity (LAST) (<https://aliemcards.com/cards/local-anesthetic-toxicity/>)
- b. Document negative aspiration, no paresthesia, low pressure injection, and in-plane image pre- and post-injection.
- c. Mark blocked extremity with initials of provider and time performed.
- d. Document block procedure note and your care in Cerner.
- e. If being discharged, document a review of post block care of blocked extremity with ED attending and patient. Call back next day with RTED instructions
- f. If being admitted, document a review of post block care of blocked extremity with anesthesiologist on call.

7. References

- a. Development of a Standardized Peripheral Nerve Block Procedure Note Form Gerancher, J et al *Regional Anesthesia and Pain Medicine*; Jan/Feb 2005; 30, 1; Nursing & Allied Health Database pg. 67
- b. Nerve Injury After Peripheral Nerve Block: Best Practices and Medical-Legal Protection Strategies, Hardman D, *Anesthesiology News*, July 2015.
- c. [www.highlandultrasound.com](http://www.highlandultrasound.com)
- d. Primary Anesthesia Nerve Block Checklist, KDMC, (refers to ICD-9)
- e. Pediatric Regional Anesthesia Network Investigators. [Complications in Pediatric Regional Anesthesia: An Analysis of More than 100,000 Blocks from the Pediatric Regional Anesthesia Network](#). *Anesthesiology*. 2018 Jul 30. PMID: [30074928](#).