

# Peroneal & Tibial Nerve Block

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*This material is provided for educational purposes and represents the technique used by the above surgeon. Catheter placement is provided for guidance only and is subject to the individual expertise, experience and school-of-thought of the surgeon placing the catheter. This protocol is not to be construed as I-Flow's specific recommendation.*

## SAMPLE PROTOCOL

**Surgical Procedures:** Ankle Fusion, Triple Arthrodesis

**Pump Used:** PM015: 270 ml x 4 ml/hr (2 ml/site); two 2.5 inch Soaker<sup>®</sup> catheters

**Other Equipment:** PLT-50C: Life-Tech ProLong Tuohy needle  
Nerve Stimulator

**Drugs in Pump:** 270 ml of 0.25% Marcaine plain

**Pre-incision infiltration:** 10 – 30 ml of 0.25% local anesthetic of physician's preference.

**Catheter Placement:** Patient is in supine position so that even slightest movement of foot and toes will be observed. The site of the needle insertion is prepared with an antiseptic solution and infiltrated with local anesthetic. Using the ProLong stimulating needle, stimulate the peroneal nerve with stimulator set at 1.0-2.0 mA (do not exceed 3.0 mA). Goal is to observe palpable twitches of the foot or toes at a current of 0.5 mA. Superficial peroneal nerve will be stimulated at 2 mA. Note the plantar flexion/eversion of foot and toes. Place first Soaker catheter 12 cm proximal to the tip of fibula in the lateral compartment of leg. The superficial peroneal nerve is a branch of the common peroneal nerve and provides muscular branches to the peroneus longus and brevis muscles and carries sensory innervation to the dorsum of the foot. Place second Soaker catheter 12 cm proximal to the tip of the medial malleolus in the posterior medial aspect of posterior muscle group compartment of the leg to block the posterior tibial nerve. The posterior tibial nerve innervates all muscles of the posterior tibial tendon, flexor digitorum and flexor hallucis, gastronemius, soleus and plantaris. Plantar flexion/inversion of the foot indicates proper placement.

**Catheter Securement Technique:** Coil catheters with Steri-Strips & cover with Transparent dressing.

## CAUTIONS

- Medications used with this system should be administered in accordance with instructions provided by the drug manufacturer (see guidelines above). Surgeon is responsible for prescribing drug based on each patient's clinical status (e.g., age, body weight, disease state of patient).
- Vasoconstrictors such as Epinephrine or Adrenaline are not necessary and may not be recommended for continuous infusions.
- Refer to ON-Q PainBuster Directions for Use for full instructions on using the ON-Q PainBuster System.
- Caution should be used when selecting appropriate volumes and flow rates keeping in mind potential fluid build up in a restricted space that may lead to a complication, particularly with hand and/or foot surgery. Complications may include: blisters, dehiscence, seromas, sloughing tissue and subsequent necrosis when too much fluid is delivered near the distal end of extremities. It's not recommended for incisional site delivery near the distal end of extremities, instead a nerve block approach is preferred. The above protocol is an example. Avoid flow rates in excess of 2ml/hr and total volumes greater than 100ml. Technical Bulletin available upon request.

## Drug Manufacturers' Recommended Dose

DRUG	MAXIMUM
<b>Maximum 24 Hour Dose</b>	
Bupivacaine (Marcaine <sup>®</sup> , Sensorcaine <sup>®</sup> )	400 mg
Levobupivacaine (Chirocaine <sup>®</sup> )	695 mg
Ropivacaine (Naropin <sup>®</sup> )	770 mg
<b>Maximum Total Dose</b> (24 hour dose not specified)	
Lidocaine (Xylocaine)	300 mg

**All local anesthetics are without epinephrine and manufacturer recommendations should be regarded as guidelines for use in adults.**



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## Results with ON-Q:

	Before ON-Q	After ON-Q
Average Narcotic Usage:	Vicodin every 6 hours	Darvocet N-100 every 4 hours

## Other Notes:

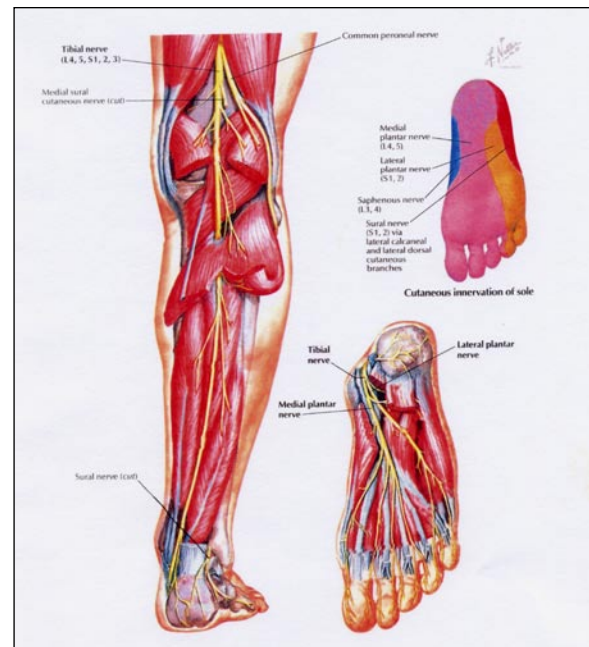
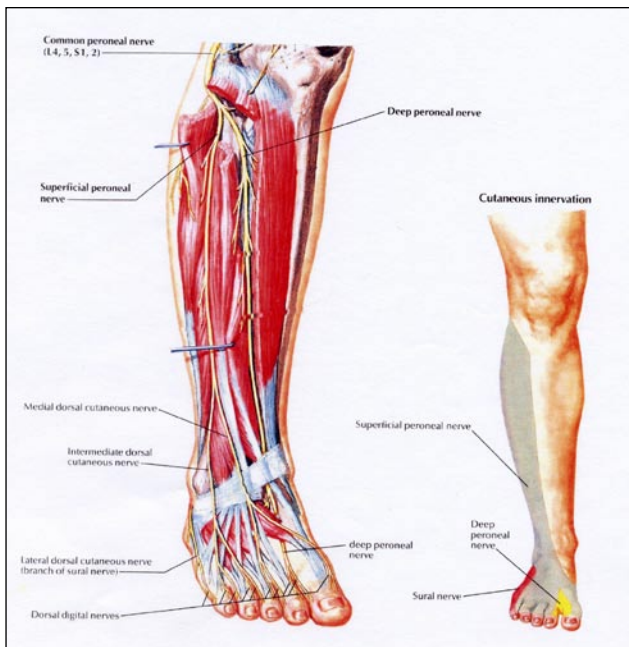
- Saphenous nerve medially provides cutaneous innervation to the medial aspect of the leg and foot.
- Deep peroneal nerve in the first web space is responsible for innervation of the first web space the subtalar joint and the muscle in the anterior compartment of the leg.
- The sural nerve on the lateral aspect of the foot provides cutaneous innervation to the lateral aspect of the foot.
- Local infiltration of the saphenous is useful in procedures involving the first ray of the foot and the sural nerve block is useful in procedures involving the lateral ray of the foot.

## Preventative Techniques for Ankle Nerve Blocks

- Infection - Use strict aseptic technique
- Hematoma - avoid multiple needle insertions & use a small gauge needle and avoid puncturing superficial veins
- Vascular Puncture - Avoid puncturing greater saphenous vein. Aspirate with 10 cc syringe to avoid intravascular injection
- Nerve damage - Do not inject when the patient complains of pain or high pressure are met on injection. Do not reinject to nerve when patient complains of pain.
- Other - Educate patient on care of lower extremity insensate.

## Reimbursement Information:

- Other Peripheral Nerve Branch Regional Block 64450
- Sciatic Nerve Block Regional Block 64445
- Modifier 59 used for all blocks to distinguish it from standard general anesthesia



*These illustrations are for general guidance only and not intended to be interpreted as precise anatomical illustrations.*



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