

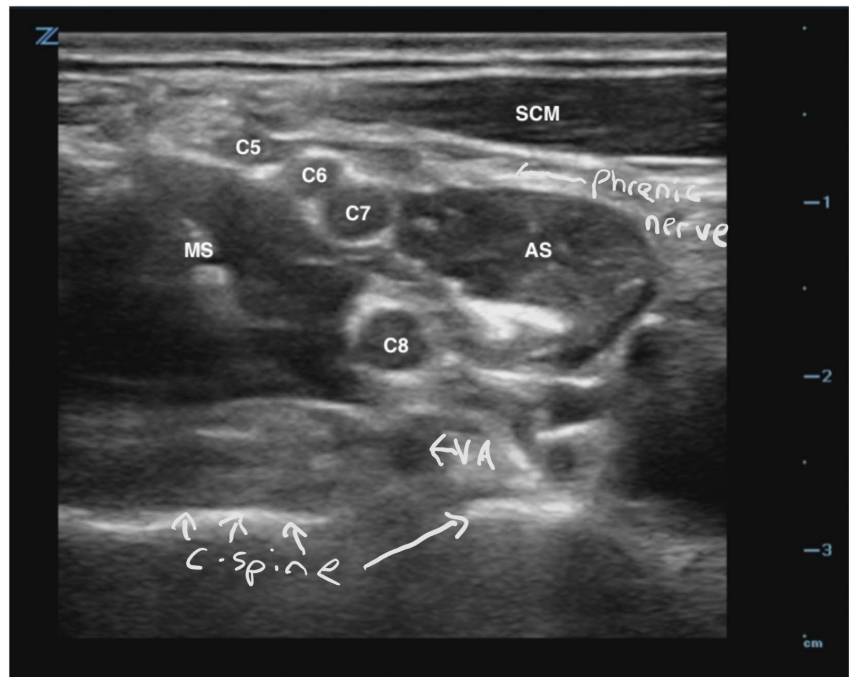
Interscalene block: Technique and Interscalene block: Side effects

The interscalene block involves injection of local anesthetic +/- adjuncts around the roots of the brachial plexus, specifically C5/C6/C7. This provides analgesia of the ipsilateral shoulder, upper arm, and elbow, however the pain relief is too incomplete to allow for a surgical block. Because roots C8/T1 may be missed, the ulnar nerve is typically spared as well.

Patient is positioned semirecumbent with the head turned away from the block side. The ultrasound image desired can be found either by scanning lateral from carotid and jugular vessels or superior from the typical location for a supraclavicular block. The probe is typically oriented transversely. The needle is then typically inserted posterolaterally to anteromedially (left to right on picture below), although the opposite approach is viable if anatomic restraints dictate. The goal is to place the needle in the plexus sheath between the nerve roots: the needle should not be directed directly at the roots themselves. If using nerve stimulation, you would expect to see deltoid, biceps, or triceps contraction at 0.5-2mA when the needle is properly positioned. Hiccups indicate the needle is too anteromedial (phrenic nerve). External rotation and abduction of the shoulder may indicate the needle is too far lateral (suprascapular nerve).

In addition to usual complications of a peripheral nerve block, the interscalene block has a risk of:

- Phrenic nerve blockade: very common with the interscalene block given its course over the anterior scalene muscle. Patients should be counseled regarding possible dyspnea and caution is advised in those who may not tolerate a reduction in their respiratory mechanics. Techniques to avoid this include using a smaller volume of local anesthetic and performing the block more caudal/distal along the brachial plexus.
- Intravascular injection: The vertebral artery and carotid artery especially are close by and intra-arterial injection could result in a seizure despite a small injection due to the increased relative concentration in the brain after injection.
- Epidural or intrathecal injection: due to proximity of the cervical foramen to the block site.
- Horner's syndrome: Due to spread of the local anesthetic to the sympathetic trunk.
- Hoarseness: Due to spread of local anesthetic to the recurrent laryngeal nerve.
- Pneumothorax: Low incidence due to cephalad location of block.



Note: Ultrasound image was borrowed from the internet. Smarter minds than me believe (and I agree) that what is labeled C6/C7 is probably just a split C6 root and the true C7 root is labeled C8.