

# PLAN A BLOCKS **Axillary Level Brachial Plexus**

**INDICATIONS:** Elbow, forearm, wrist and hand surgical anaesthesia and analgesia

**TARGET:** Musculocutaneous (McN), radial (RN), median (MN) & ulnar (UN) nerves  
(+ medial cutaneous nerves of arm/forearm (MCNA/F) & intercostobrachial (ICBN))

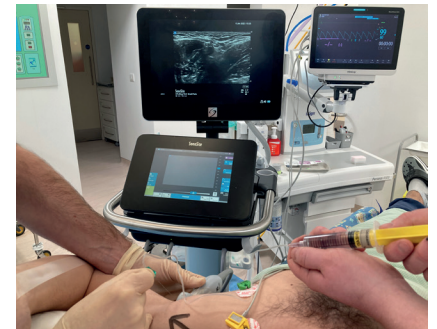
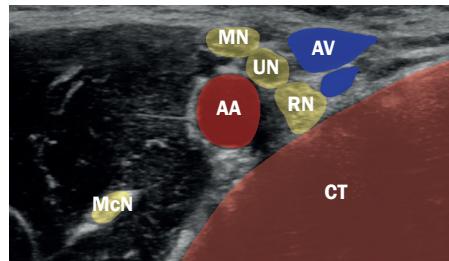
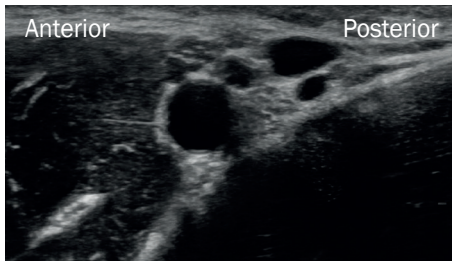
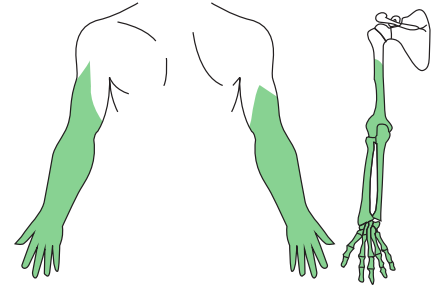
**LOCAL:** ≤25 ml plus local for skin

## KIT

- PPE (droplet precautions)
- Sterile gloves
- Linear US probe + cover
- Sterile gel
- 0.5% chlorhexidine
- LA for skin (+ syringe/needle)
- 80 mm 22G NR fit block needle
- 2 x 20 ml syringes

## PRE-PROCEDURE

- Assistant, monitoring (ECG, SpO<sub>2</sub>, BP) & IV access
- Operator at head of bed, patient semi-recumbent with shoulder abducted & externally rotated, elbow flexed
- US machine on block side
- Aseptic skin prep (allow to dry)



## SCANNING

- US probe transverse across proximal medial arm (junction of biceps and pec major)
- Identify axillary artery (AA) and vein(s) (AV) over conjoint tendon (CT)
- Identify nerves (McN, RN, MN, UN)(McN is variable - often between coracobrachialis and biceps, moving laterally further distally)

## STOP BEFORE YOU BLOCK

(Follow Prep, Stop, Block)

- Apply pressure with probe to compress AV before insertion of needle
- LA to skin
- Block needle in plane through single skin puncture
- Withdraw & reposition needle if paraesthesia
- Low-pressure injection (<15 cmH<sub>2</sub>O), stop if LA spread not seen  
Aspirate every 5 ml & every needle reposition
- McN 3 ml, RN 7 ml deep to AA, 5 ml each to MN & UN over/around AA (will cover MCNA/F)
- ICBN 5 ml s/cut injection under US probe

## POST-PROCEDURE

- Monitor for minimum 30 min (as per AoA Standards of Monitoring)
- Test block after 15 min (sensation & motor)
- Document procedure, extent of block & post-block care

## TESTING THE BLOCK

NERVE	SENSORY	MOTOR
McN	Lateral forearm	Elbow flexion
RN	1st dorsal webspace	Elbow, wrist & finger extension
MN	Thenar eminence	Thumb abduction
UN	Ulnar/medial border of hand	Finger abduction
MCNA/F	Medial arm/forearm	N/A
ISBN	Medial arm (tourniquet)	N/A
	Site of surgery	

## EXAMPLE TIMINGS

0.5% levobupivacaine  
(toxic dose 2 mg/Kg)

- Surgical block achieved in 20 min
- Surgical Anaesthesia for 6 hr
- Analgesia 12+ hr post block



## REFERENCES

- Barron et al (2020) RA-UK Plan A Blocks Poster – Upper Limb & Trunk  
Bowness et al (2021) International consensus on anatomical structures to identify on ultrasound for the performance of basic blocks in ultrasound-guided regional anaesthesia  
<http://dx.doi.org/10.1136/rapm-2021-103004>  
Haslam et al (2021) Prep, stop, block': refreshing 'stop before you block' with new national guidance.  
<https://www.ra-uk.org/index.php/prep-stop-block>

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