

MINORS

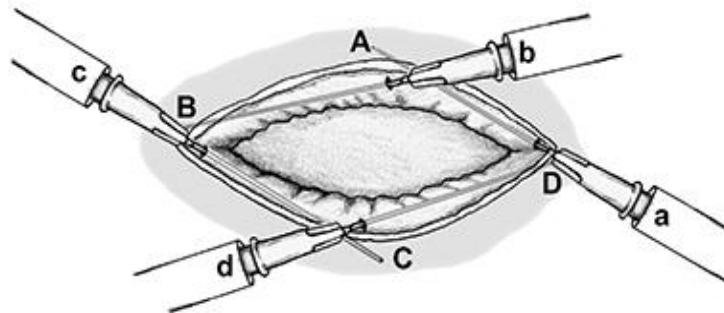
WOUND ANAESTHESIA

Local anaesthetic is a useful tool for reducing a patient's pain and increasing cooperation when managing wounds.

Give local anaesthetic prior to cleaning, exploring and closing wounds, unless the wound is so trivial that local anaesthetic would cause more pain (eg tiny laceration requiring irrigation followed by glue).

Lidocaine and bupivacaine are both commonly used.

	Lidocaine	Bupivacaine
Onset of action	2-5 mins	5-10 mins
Duration	50-120 mins	240-480 mins
Preparation	1% lidocaine = 10mg/ml	Bupivacaine 0.5% = 5mg/ml
Maximum dose (no adrenaline)	3mg/kg	2mg/kg
Maximum dose (adrenaline)	7mg/kg	2mg/kg



Administration

- Always check for nerve injury prior to giving local anaesthetic.
- Lie the patient down in a comfortable position.
- Draw up the local anaesthetic in a syringe and attach a fine needle (orange or blue)
- Wash your hands, use gloves and clean the skin.
- Insert the needle into the edges of the wound aiming for the subcutaneous layer.
- Aspirate the syringe prior to each injection – if blood is aspirated reposition the needle until you are no longer in a vessel. Injecting into a vessel increases the likelihood of toxicity.
- Infiltrate around the entire circumference of the wound.
- Try to minimise the number of times you insert the needle – you should be able to cover large areas by changing the position of the needle after insertion.
- Wait a few minutes before testing efficacy with the sharp tip of a needle.
- Document the time and dose of anaesthetic in the notes.

Complications:

- Pain
- Toxicity
- Catecholamine toxicity (if adrenaline is used)
- Allergy (rare)

Those at increased risk of toxicity include:

- Small children
- The elderly
- Heart block
- Low cardiac output
- Epilepsy
- Myasthenia gravis
- Hepatic impairment
- Porphyria
- Anti-arrhythmic or beta blocker therapy

Adrenaline causes vasoconstriction which provides benefits:

- Increased duration of action
- Reduction of systemic absorption
- Reduction of bleeding

Avoid adrenaline in:

- Digital nerve blocks
- Nose
- Ear
- Penis
- Flap lacerations
- Ischaemic heart disease
- Hypertension
- Peripheral vascular disease
- Thyrotoxicosis
- Pheochromocytoma
- Patients on beta blockers

Local anaesthetic is ineffective in infected wounds – the acidic environment reduces effectiveness and inflammation increases the elimination of the drug.