



Drug Therapy Protocols: Lidocaine 1%

Policy code	DTP_LID_0924
Date	September, 2024
Purpose	To ensure a consistent procedural approach to lidocaine 1% administration.
Scope	Applies to all Queensland Ambulance Service (QAS) clinical staff.
Health care setting	Pre-hospital assessment and treatment.
Population	Applies to all ages unless specifically mentioned.
Source of funding	Internal – 100%
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Lidocaine 1%

September, 2024

Drug class

Local anaesthetic^[1,2]

Pharmacology

Lidocaine 1% stabilises the neuronal membrane and prevents the transmission of nerve impulses, thereby effecting a local anaesthetic action.^[1,2]

Metabolism

80% metabolised by the liver and the remainder is excreted by the kidneys.^[1]

Indications

- Pain associated with IO drug and fluid administration following EZ-IO[®] needle insertion
- Local anaesthesia (for the purpose of radial artery line replacement, skin closure – suturing, fishhook removal AND/OR thoracostomy)
- To reconstitute ceftriaxone for the purpose of IM injection

Contraindications

- Allergy AND/OR Adverse Drug Reaction

Precautions

- Inadvertant intravascular injection
- Severe kidney or liver disease

Side effects

- Convulsions
- Hypotension
- Nausea
- Tinnitus

Presentation

- Ampoule, 50 mg/5 mL lidocaine 1%

Onset (SUBCUT)

1–10 minutes

Duration (SUBCUT)

Up to 1 hour


Half-life


Not applicable

Schedule

- S₄ (Restricted drugs).

Routes of administration

Intraosseous injection (IO) 

Subcutaneous injection (SUBCUT) 


Intramuscular injection (IM) 

Special notes


- Ambulance officers must only administer medications for the listed indications and dosing range. Any consideration for treatment outside the listed scope of practice requires mandatory approval via the *QAS Clinical Consultation and Advice Line*.
- Local anaesthesia injections should always be administered slowly with frequent aspirations to avoid inadvertent intravascular injection.
- All cannulae and IV lines must be flushed thoroughly with sodium chloride 0.9% following each medication administration.

Adult dosages^[1-4]


Pain associated with IO drug and fluid administration following EZ-IO[®] needle insertion

	IO	60 mg. (Administer 40 mg over 2 minutes, allow lidocaine to dwell in IO space for 1 minute, administer a rapid 10 mL sodium chloride 0.9% flush and then administer and additional 20 mg of lidocaine over 1 minute). Total max dose 60 mg.
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Local anaesthesia (for the purpose of radial artery line placement, regional anaesthesia (digital block), skin closure – suturing, fishhook removal AND/OR thoracostomy)


	SUBCUT	Up to 3 mg/kg (0.3 mL/kg) of lidocaine 1%. Total maximum infiltration 200 mg (20 mL).
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To reconstitute ceftriaxone for the purpose of IM injection


	IM	As authorised on DTP: Ceftriaxone
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Paediatric dosages^[1-4]


Pain associated with IO drug and fluid administration following EZ-IO[®] needle insertion

	IO	0.75 mg/kg. (Administer 0.5 mg/kg (max 40 mg) over 2 minutes, allow lidocaine to dwell in IO space for 1 minute, administer a rapid 5 mL sodium chloride 0.9% flush and then administer an additional half initial dose of lidocaine (max 20 mg) over 1 minute. Total max dose 60 mg.
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Local anaesthesia (for the purpose of radial artery line placement, regional anaesthesia (digital block), skin closure – suturing, fishhook removal AND/OR thoracostomy)

	SUBCUT	Up to 3 mg/kg (0.3 mL/kg) of lidocaine 1%. Total maximum infiltration 150 mg (15 mL).
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To reconstitute ceftriaxone for the purpose of IM injection

	IM	As authorised on DTP: Ceftriaxone
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