Drug Therapy Protocols: Lidocaine 1% (lignocaine 1%)

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<table>
<thead>
<tr>
<th>Date</th>
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<tr>
<td>Purpose</td>
<td>To ensure a consistent procedural approach to Lidocaine 1% (lignocaine 1%) administration.</td>
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<td>Scope</td>
<td>Applies to all QAS clinical staff.</td>
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<td>Information security</td>
<td>This document has been security classified using the Queensland Government Information Security Classification Framework (QGISCF) as UNCLASSIFIED and will be managed according to the requirements of the QGISF.</td>
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**Lidocaine 1% (lignocaine 1%)**

**Drug class**
Local anaesthetic

**Pharmacology**
Lidocaine (lignocaine 1%) stabilises the neuronal membrane and prevents the transmission of nerve impulses, thereby effecting a local anaesthetic action.[1-4]

**Metabolism**
80% metabolised by the liver and the remainder is excreted by the kidneys.[5]

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**Indications**
- Pain associated with IO drug and fluid administration following EZ-IO® needle insertion
- Local anaesthesia
  - radial artery line placement
  - Skin closure – suturing
  - fish hook removal
  - thoracostomy

**Contraindications**
- KSAR or hypersensitivity to lidocaine (lignocaine)

**Precautions**
- Inadvertent intravascular injection

**Side effects**
- Convulsions
- Hypotension
- Nausea
- Tinnitus

**Presentation**
- Ampoule, 50 mg/5 mL lignocaine 1%

**Onset (IV) | Duration (IV) | Half-life**
---|---|---
5–10 minutes | 1–2.5 hours | Not applicable
**Lidocaine 1% (lignocaine 1%)**

### Special notes
- 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.

### Routes of administration
- Intraosseous injection (IO)
- Subcutaneous injection (SUBCUT)

### Schedule
- S4 (Restricted drugs).

### Adult dosages

**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.

**Local anaesthesia** (for the purpose of radial artery line placement, skin closure – suturing, fishhook removal AND/OR thoracostomy)
- **SUBCUT**
  - Up to 3 mg/kg
  - Total max infiltration 200 mg.

### Paediatric dosages

**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.

**Local anaesthesia** (for the purpose of radial artery line placement, skin closure – suturing, fishhook removal AND/OR thoracostomy)
- **SUBCUT**
  - Up to 3 mg/kg
  - Total max infiltration 200 mg.