# Lidocaine (Lignocaine)

This document should be read in conjunction with this [DISCLAIMER](#).

## Presentation
Ampoule: 50mg in 5mL (1%) (Pfizer® IV Use – No Preservative)

## Action & Indication
Lidocaine blocks both initiation and conduction of nerve impulses by decreasing ionic flux through the neuronal membrane by blocking sodium channels.
- Intractable seizures: Severe recurrent or prolonged seizure not responding to first line therapies

## Precautions
Congenital heart disease and electrolyte disturbance increase risk of cardiotoxicity
Avoid administering with or subsequent to phenytoin as may have cardiac complications
Bradycardia is common, consider stopping when bradycardia worsens.

## Dose
**Intractable Seizures**
Total infusion time is 27 hours and 40 minutes

**Loading Dose:** 2mg/kg over 10 minutes

**Maintenance Dose:**
- **Weight:** 2 to 2.5kg
  - 6 mg/kg/hr for 3.5 hours then,
  - 3 mg/kg/hour for 12 hours then,
  - 1.5 mg/kg/hr for 12 hours then cease

- **Weight:** 2.5 to 4.5kg
  - 7 mg/kg/hour for 3.5 hours then,
  - 3.5 mg/kg/hour for 12 hours then,
  - 1.75 mg/kg/hour for 12 hours then cease.

Dosage adjustment may be required in renal or hepatic dysfunction (90% hepatic metabolism).

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**HIGH RISK Medication**
Incorrect dosing with respect to rate and weight may result in arrhythmia or heart block
| **Monitoring** | Monitor for clinical response and consider monitoring plasma concentration (aiming < 9 microg/mL) if lidocaine accumulation is suspected (e.g. hepatic and renal dysfunction) or failure to control seizure.  
Continuous monitoring of heart rate, blood pressure and ECG  
Monitor LFT, Urea, Electrolytes and Creatinine. |
|---------------|--------------------------------------------------------------------------------------------------|

| **Preparation** | Compatible Fluid: Sodium Chloride 0.9%, Glucose 5% and Glucose 10%  
**Intractable Seizures**  
**IV:**  
**Dilution**  
Withdraw 87.5mg /kg (8.75mL/kg) of babies weight and dilute to 50mL with compatible fluid  
This will give the following infusion rate:  
1 mL/hour = 1.75 mg/kg/hour  
Available from CIVAS (KEMH & PCH) |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------|

| **Adverse Effect** | **Common:** Bradycardia (consider ceasing if worsens), hypotension  
**Rare:** Seizures, loss of consciousness, respiratory depression, heart block, cardiovascular collapse |
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### Standards Applicable:
- NSQHS Standards:
  - 1. Clinical Care is Guided by Current Best Practice,
  - 4. Medication Safety;

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