



NEONATAL

LIDOCAINE (LIGNOCAINE)



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

HIGH RISK Medication 

Incorrect dosing with respect to rate and weight may result in arrhythmia or heart block

Presentation	Ampoule: 50mg in 5mL (1%) (Pfizer® IV Use – No Preservative)
Action & Indication	<p>Lidocaine blocks both initiation and conduction of nerve impulses by decreasing ionic flux through the neuronal membrane by blocking sodium channels.</p> <ul style="list-style-type: none"> Intractable seizures: Severe recurrent or prolonged seizure not responding to first line therapies
Precautions	<p>Congenital heart disease and electrolyte disturbance increase risk of cardiotoxicity</p> <p>Avoid administering with or subsequent to phenytoin as may have cardiac complications</p> <p>Bradycardia is common, consider stopping when bradycardia worsens.</p>
Dose	<p><u>Intractable Seizures</u></p> <p>Total infusion time is 27 hours and 40 minutes</p> <p>Loading Dose: 2mg/kg over 10 minutes</p> <p>Maintenance Dose:</p> <p><u>Weight: 2 to 2.5kg</u></p> <p>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</p> <p><u>Weight: 2.5 to 4.5kg</u></p> <p>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.</p> <p>Dosage adjustment may be required in renal or hepatic dysfunction (90% hepatic metabolism).</p>

Monitoring	<p>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.</p> <p>Continuous monitoring of heart rate, blood pressure and ECG</p> <p>Monitor LFT, Urea, Electrolytes and Creatinine.</p>
Preparation	<p>Compatible Fluid: Sodium Chloride 0.9%, Glucose 5% and Glucose 10%</p> <p><u>Intractable Seizures</u></p> <p><u>IV:</u></p> <p><i>Dilution</i></p> <p>Withdraw 87.5mg /kg (8.75mL/kg) of babies weight and dilute to 50mL with compatible fluid</p> <p>This will give the following infusion rate:</p> <p>1 mL/hour = 1.75 mg/kg/hour</p> <p>Available from CIVAS (KEMH & PCH)</p>
Adverse Effect	<p>Common: Bradycardia (consider ceasing if worsens), hypotension</p> <p>Rare: Seizures, loss of consciousness, respiratory depression, heart block, cardiovascular collapse</p>
References	<p>Mangum B. Neofax 2014. Thomson Reuters; 2014.</p> <p>Van den Broek MP, Rademaker CM, van Straaten HL, et al. Anticonvulsant treatment of asphyxiated newborns under hypothermia with lignocaine: efficacy, safety and dosing. Arch Dis Child Fetal Neonatal Ed 2013;98:F341-345</p> <p>Clinical Pharmacology [Accessed 13/10/2016]</p>

Keywords:	lidocaine, lignocaine		
Publishing:	<input checked="" type="checkbox"/> Intranet <input checked="" type="checkbox"/> Internet		
Document owner:	Head of Department - Neonatology		
Author / Reviewer:	KEMH & PCH Pharmacy / Neonatology Directorate		
Date first issued:	January 2011	Version:	3.5
Last reviewed:	June 2017	Next review date:	March 2020
Endorsed by:	Neonatal Directorate Management Group	Date:	June 2017
Standards Applicable:	NSQHS Standards: 1  Clinical Care is Guided by Current Best Practice, 4  Medication Safety;		
Printed or personally saved electronic copies of this document are considered uncontrolled. Access the current version from the WNHS website.			

© Department of Health Western Australia 2017