



NEONATAL Medication Monograph

METHYLENE BLUE (METHYLTHIONINIUM)

(Proveblue®)

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

Restricted: Requires neonatologist review within 24 hours of initiation

 **Methylene blue is INCOMPATIBLE with Sodium Chloride 0.9%**

Presentation	Ampoule: 50mg/10mL = 5mg/mL
Description	At low doses, methylene blue is metabolised to leucomethylene blue which hastens the conversion of methaemoglobin to haemoglobin
Indications	Drug-induced methaemoglobinaemia
Contraindications	G6PD deficiency (increased risk of haemolytic anaemia) Severe hypersensitivity to methylene blue or other thiazine dyes.
Precautions	Severe renal or hepatic impairment.
Dosage	IV: 1 mg/kg/dose. Dose may be repeated after one hour if needed Maximum: 2 doses.
Adverse Reactions	Common: blue/green discolouration of urine/faeces, nausea, vomiting, diarrhoea, abdominal pain, hypertension, diaphoresis Serious: , cyanosis, anaphylaxis, haemolytic anaemia
Interactions	Methylene blue has a number of medication interactions – administer via single line – seek advice from pharmacist as required.
Compatible Fluids	Glucose 5% Methylene blue is <u>INCOMPATIBLE</u> with Sodium Chloride 0.9% (may be used to flush the line only)
Preparation	IV: Use undiluted or dose may be diluted to 50mL to aid administration and avoid local pain.

Administration	<p>IV:</p> <p>Use immediately after preparation.</p> <p>Inject slowly over 5 to 30 minutes.</p> <p>If administered undiluted, follow with a 15-30mL flush.</p>
Monitoring	<p>Monitor for necrosis caused by extravasation.</p> <p>Monitor methaemoglobin levels during treatment and until resolution.</p> <p>ECG monitoring during treatment and until resolution.</p> <p>Monitor for signs and symptoms of serotonin syndrome (agitation, tachycardia, flushing, hyperthermia, diaphoresis, tremor, myoclonus, diarrhoea, seizures)</p>
Storage	<p>Store at room temperature, below 25°C.</p> <p>Protect from light during storage.</p> <p>Use immediately after dilution.</p>
Notes	<p>Solution is clear and blue.</p> <p>Higher than recommended doses may accentuate methaemoglobinaemia</p> <p>Causes staining of skin, saliva, mucous membranes, urine and faeces.</p> <p>Cannot be added to enteral feeding products.</p>
References	<p>Kemp AC, McDowell JM. Paediatric Pharmacopoeia. 13th edition. Parkville, IVC: Royal Children's Hospital Pharmacy Department; 2002. p. 170.</p> <p>Plover C, Porrello E. Paediatric injectable guidelines 2019 ed. Flemington (Victoria): The Royal Children's Hospital Melbourne; 2019. p. 60.</p> <p>Society of Hospital Pharmacists of Australia. Sodium Nitroprusside. In: Australian Injectable Drugs Handbook [Internet]. [St Leonards, New South Wales]: Health Communication Network; 2017 [cited 2017 April 13]. Available from: http://aidh.hcn.com.au</p> <p>Takemoto CK, Hodding JH, Kraus DM. Pediatric & neonatal dosage handbook with international trade names index: a universal resource for clinicians treating pediatric and neonatal patients. 24th ed. Hudson (Ohio): Lexicomp; 2017. p. 1321-1323.</p> <p>Truven Health Analytics. Methylene Blue. In: NeoFax [Internet]. Greenwood Village (CO): Truven Health Analytics; 2017 [cited 2019 Oct 07]. Available from: https://neofax.micromedexsolutions.com/</p>

Keywords:	Methylene blue, Proveblue®, methaemoglobinaemia		
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:	October 2008	Version:	3.0
Last reviewed:	October 2019	Next review date:	Oct 2022
Endorsed by:	Neonatal Directorate Management Group	Date:	Oct 2019
Standards Applicable:	NSQHS Standards: 1  Governance, 3  Infection Control, 4  Medication Safety, 8  Acute Deterioration		
<p>Printed or personally saved electronic copies of this document are considered uncontrolled.</p> <p>Access the current version from the WNHS website.</p> <p>For any enquiries relating to this guideline, please email KEMH.PharmacyAdmin@health.wa.gov.au</p>			

© Department of Health Western Australia 2019