



NEONATAL

# DEXMEDETOMIDINE




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

**HIGH RISK Medication** 

Rapid IV administration of Dexmedetomidine may cause bradycardia and sinus arrest.  
Do not stop infusion abruptly as may result in rebound symptoms.

<b>Presentation</b>	Vial: 200microgram/2mL
<b>Action &amp; Indication</b>	<p>Selective alpha 2-adrenoreceptor agonist</p> <ul style="list-style-type: none"> <li>• Sedative</li> <li>• Anxiolytic</li> <li>• Analgesic</li> </ul> <p>Use with caution in patients with hypotension, severe bradycardia, ventricular dysfunction, hypovolaemia, diabetes, renal/hepatic impairment, post-operative congenital heart disease, concurrent use of vasodilator or negative chronotropic agents.</p>
<b>Dose</b>	<p><b><u>All Indications</u></b></p> <p><b>IV:</b></p> <p>&gt; 36 weeks corrected gestational age</p> <p><b>Loading Dose:</b> 0.05 – 0.2 microg/kg over 30 minutes</p> <p><b>Maintenance Dose:</b> 0.05 to 0.6 microgram/kg/hour</p> <p>Dosing should be tapered after 24 hours as tolerance may develop and not given for longer than 2-3 days.</p>
<b>Monitoring</b>	Monitor heart rate, MAP, CVP, blood pressure, oxygen saturation, respiratory rate, urine output
<b>Preparation</b>	<p>Compatible Fluids: Sodium chloride 0.9% or glucose 5%</p> <p><b><u>IV Infusion:</u></b></p> <p><b><i>Dilution</i></b></p> <p>Dilute 50 microgram (0.5mL) with 49.5 mL of appropriate infusion fluid</p> <p><u>Final concentration is 1microgram/mL</u></p>

<b>Adverse Effect</b>	<p><b>Common:</b> Withdrawal and rebound symptoms (hypertension, agitation, tachycardia, dilated pupils, diarrhoea, increased muscle tone, emesis)</p> <p><b>Serious:</b> bradycardia, hypotension, sinus arrest; patients with high vagal tone or with rapid administration.</p>
<b>References</b>	<p>Mangum B. Neofax 2012. Thomson Reuters; 2012.</p> <p>Lam et al. Haemodynamic Effects of Dexmedetomidine in Critically ill Neonates and Infants with Heart Disease. Pediatric Cardiology 2012; 33:1069-1077.</p> <p>Mahmoud et al. Dexmedetomidine: review, update and future considerations of paediatric perioperative and periprocedural applications and limitation. BJA 2015;171-82.</p>

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