



NEONATAL

DEXMEDETOMIDINE

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




Highly Restricted: Requires Neonatologist approval before commencing

⚠ HIGH RISK Medication

Rapid IV administration of Dexmedetomidine may cause bradycardia and sinus arrest.

Presentation	Vial: 200microgram/2mL Infusion: 200mcirogram/50mL = 4microg/mL
Classification	Selective alpha 2-adrenoreceptor agonist with sedative, analgesic and anxiolytic properties
Indication	<ul style="list-style-type: none"> • Sedative for intubated and mechanically ventilated patients during treatment in an ICU • Used for extremely agitated ventilated patients to facilitate weaning off a ventilator • Post-operative Analgesia
Precautions	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.
Dose	<p><u>All Indications</u></p> <p>IV:</p> <p>> 36 weeks corrected gestational age</p> <p>Loading Dose: 0.05 – 0.2 microgram/kg over 10 to 20minutes as per treating clinician</p> <p>Maintenance Dose: 0.05 to 0.6 microgram/kg/hour</p>
Dose Adjustment	Consider dose reduction in patients with impaired liver function
Monitoring	Monitor heart rate, MAP, blood pressure , oxygen saturation, respiratory rate, urine output

Compatible Fluids	Sodium Chloride 0.9%, Glucose 5%
Preparation	<p>IV Infusion:</p> <p>Use ready to use Infusion if available</p> <p>Withdraw 2 mL (200microgram) from the vial and make to a final volume of 50mL with a compatible fluid</p> <p>Concentration is 200microgram/50mL = 4microgram/mL.</p> <p>Shake gently to mix well.</p>
Administration	<p>Infuse using a rate-controlled infusion device.</p> <p>Loading Dose: 0.05 – 0.2 microg/kg over 10 to 20 minutes</p> <p>Maintenance Dose: 0.05 to 0.6 microgram/kg/hour</p>
Adverse Reactions	<p>Common: Withdrawal and rebound symptoms (hypertension, agitation, tachycardia, dilated pupils, diarrhoea, increased muscle tone, emesis)</p> <p>Serious: Bradycardia, hypotension, sinus arrest; patients with high vagal tone or with rapid administration.</p>
Storage	<p>Store at room temperature, below 25°C</p> <p>Infusion solution: stable for 24 hours at 2 to 8 °C</p>
Interactions	Contact Pharmacy for further information regarding compatibility.
Related Clinical Guidelines	Post-Operative: Analgesia
References	<p>Phelps SJ, Hageman TM, Lee KR, Thompson AJ. Pediatric injectable drugs : the teddy bear book. Tenth ed. Bethesda (Maryland): American Society of Health-System Pharmacists; 2013. 796 p.278-281</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. 23rd ed. Hudson (Ohio): Lexicomp; 2401. 2, p.591-593</p> <p>Truven Health Analytics. Dexmedetomidine. In: NeoFax [Internet]. Greenwood Village (CO): Truven Health Analytics; 2017 [cited 2017 Oct 18]. Available from: https://neofax.micromedexsolutions.com/AIDH</p> <p>Society of Hospital Pharmacists of Australia. Dexmedetomidine. In: Australian Injectable Drugs Handbook [Internet]. [St Leonards, New South Wales]: Health Communication Network; 2017 [cited 2019 April 11]. Available from: http://aidh.hcn.com.au</p> <p>Australian Medicines Handbook. Dexmedetomidine. In: Australian Medicines Handbook [Internet]. Adelaide (South Australia): Australian Medicines Handbook; 2017 [cited 2019 April 11]. Available from: https://amhonline.amh.net.au/</p>

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