



NEONATAL Medication Monograph

# NEOSTIGMINE

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





**Restricted:** Requires Neonatologist or Anaesthetist review within 24 hours of initiation

**⚠ HIGH RISK Medication**

<b>Presentation</b>	Ampoule: 2.5mg/mL = 2500microgram/mL
<b>Description</b>	Anticholinesterase
<b>Indications</b>	<ul style="list-style-type: none"> <li>Reverse effects of neuromuscular blocking drugs.</li> <li>May be used to test for, or to treat, neonatal transient myasthenia gravis. Neonatal persistent (congenital) myasthenia gravis.</li> </ul>
<b>Contraindications</b>	Contraindicated in patients with intestinal or urinary obstruction
<b>Dosage</b>	<p><a href="#">Reversal of neuromuscular blockade agent (NMBA)</a> <b>Note:</b> To be used in conjunction with atropine (20microg/kg/dose)</p> <p><b>IV:</b> 30 to 70 microgram/kg/ dose <b>Maximum total dose:</b> 70microgram /kg</p> <p><a href="#">Myasthenia gravis</a> <b>Test dose:</b> <b>Note:</b> Premedication with atropine (20microgram/kg/dose) is recommended. <b>IM:</b> 150microgram given 30 minutes before feeding</p>
<b>Dosage Adjustment</b>	<p><a href="#">Reversal of neuromuscular blockade agent (NMBA)</a> The selection of the lower or higher dose range depends on the extent of spontaneous recovery that has occurred at the time of administration, the half-life of the NMBA being reversed, and whether there is a need to rapidly reverse the NMBA.</p> <p><a href="#">Myasthenia gravis</a> Obtain specialist advice for long term use.</p>

<b>Adverse Reactions</b>	<b>Common:</b> muscle weakness, hypotension, bradycardia, excessive salivation, tremors
	<b>Serious:</b> respiratory depression, bronchospasm
<b>Compatible Fluids</b>	Sodium Chloride 0.9%, Glucose 5%, Glucose 10%,
<b>Preparation</b>	<p><b><u>IV/IM:</u></b> Use undiluted. May dilute contents following the below directions for a more dilute preparation.</p> <p><b><i>Dilution</i></b> Withdraw 1mL (2500micrograms) and make up to a final volume of 16.5mL with a compatible fluid.</p> <p>Concentration is 2500micrograms in 16.5mL <u>Final concentration is <math>\approx</math> 150 microgram/mL</u></p>
<b>Administration</b>	<p><b><u>IV/IM:</u></b> Give over 1 minute.</p> <p>Give with atropine or glycopyrrolate to prevent possible bradycardia, increased salivation, and hyperperistalsis.</p>
<b>Monitoring</b>	ECG, blood pressure, heart rate
<b>Storage</b>	Store at room temperature, below 25°C. Protect from light
<b>Notes</b>	Give with atropine or glycopyrrolate to prevent possible bradycardia, increased salivation, and hyperperistalsis.
<b>References</b>	<p>British Medical Association, Royal Pharmaceutical Society. BNF for Children. London: BMJ Group, Pharmaceutical Press; 2019</p> <p>Ainsworth SB. Neonatal formulary 7: drug use in pregnancy and the first year of life. Seventh ed. Chichester (West Sussex): John Wiley &amp; Sons Inc.; 2015. 631 p.349</p> <p>Truven Health Analytics. Neostigmine. In: NeoFax [Internet]. Greenwood Village (CO): Truven Health Analytics; 2020 [cited 2020 Aug 08]. Available from: <a href="https://neofax.micromedexsolutions.com/">https://neofax.micromedexsolutions.com/</a></p> <p>Takemoto CK, Hodding JH, Kraus DM. Pediatric &amp; neonatal dosage handbook with international trade names index : a universal resource for clinicians treating pediatric and neonatal patients. 24th ed. Hudson (Ohio): Lexicomp; 2401. 2, p1116.</p>

	<p>Department for Health and Ageing, Government of South Australia. Neostigmine. South Australian Neonatal Medicine Guidelines [Internet]. 2019 [updated 2018 Jul 5; cited 2020 Aug 08]. Available from: <a href="https://www.sahealth.sa.gov.au/">https://www.sahealth.sa.gov.au/</a></p> <p>Kemp CA, McDowell JM. Paediatric pharmacopeia. 13th Ed. Melbourne: Royal Children's Hospital; 2002.</p> <p>Society of Hospital Pharmacists of Australia. Neostigmine methylsulfate. In: Australian Injectable Drugs Handbook [Internet]. [St Leonards, New South Wales]: Health Communication Network; 2020 [cited 2020 Mar 10]. Available from: <a href="http://aidh.hcn.com.au">http://aidh.hcn.com.au</a></p> <p>King Guide Publications, Inc. Neostigmine methylsulfate. In: King Guide to Parenteral Admixtures [Internet]. Napa, CA; 2019 [cited 2020 Aug 08]. Available from: <a href="http://www.kingguide.com.kelibresources.health.wa.gov.au">http://www.kingguide.com.kelibresources.health.wa.gov.au</a></p>
<b>Related clinical guidelines</b>	<a href="#">Transport Medications</a>

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