



NEONATAL Medication Monograph

PHENOBARBITONE (Phenobarbital)




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

Restricted: Requires Neonatologist or Neurologist review within 24 hours of initiation

Presentation	<p>Oral Solution: 10mg/mL (Auspman)</p> <p>Ampoule: 200mg/mL</p>
Description	Barbiturate - Anticonvulsant and sedative
Indications	<ul style="list-style-type: none"> • For sedation and Treatment of neonatal seizures and for neonatal abstinence syndrome. • Used treat hyperbilirubinemia in infants with jaundice.
Contraindications	<p>Avoid in acute porphyrias</p> <p>Severe respiratory depression</p> <p>Severe hepatic impairment</p>
Dosage	<p>Neonatal seizures</p> <p><u>IV/IM/Oral:</u></p> <p><i>Loading dose:</i></p> <p>20mg/kg</p> <p>If no response, a further 10 – 20mg/kg may be given.</p> <p>Maximum loading dose : 40mg/kg</p> <p><i>Maintenance dose:</i></p> <p>3 – 5mg/kg once daily commencing 12 to 24 hours after the loading dose</p> <p>Neonatal Jaundice</p> <p><u>IV/IM/Oral:</u></p> <p>5mg/kg once daily</p> <p>Neonatal Abstinence Syndrome</p> <p><u>IV/IM/Oral:</u></p> <p>Refer to clinical practice guideline Neonatal Abstinence Syndrome</p>

Dosage Adjustment	Adjust dose according to response and concentration monitoring Dose may require adjustment in severe renal impairment
Adverse Reactions	Common: Hypotension, respiratory depression, extravasation
	Serious: Paradoxical hyperactivity and irritability may occur
Interactions	Phenobarbitone interacts with a range of medications – contact Pharmacy for further advice
Compatible Fluids	Glucose 5%, Glucose 10%, Sodium Chloride 0.9%
Preparation	IM: Use undiluted IV: Withdraw 1 mL (200mg) of phenobarbitone and make up to a final volume with 10mL of a compatible fluid Concentration is 200mg/10mL = <u>20mg/mL</u>
Administration	Oral: Mixture is bitter and may be poorly tolerated. Consider administering a loading dose via the IGT if the infant has poor suck. IM: Refer to clinical practice guideline Medication Administration IV: Infuse over 20 to 30 minutes or at a maximum rate of 1mg/kg/minute
Monitoring	Observe for signs of extravasation Concentration monitoring Sampling time: Immediately prior to next dose Therapeutic range: 15 – 40mg/L Time to reach steady state: 2 – 4 weeks
Storage	Store at room temperature, below 25°C
Related clinical guidelines	Neonatal Abstinence Syndrome Seizures: Neonatal Hypoxic Ischaemic Encephalopathy (HIE) End of Life Care: Palliative Care, Grief and Loss Medication Administration: Intramuscular, Subcutaneous, Intravascular

References	<p>Truven Health Analytics. Phenobarbital. In: NeoFax [Internet]. Greenwood Village (CO): Truven Health Analytics; 2020 [cited 2020 Apr 08]. Available from: https://neofax.micromedexsolutions.com/AIDH</p> <p>Australian Medicines Handbook. Phenobarbital. In: Australian Medicines Handbook Children's Dosing Companion [Internet]. Adelaide (South Australia): Australian Medicines Handbook; 2020 [cited 2020 Apr 08]. Available from: https://childrens.amh.net.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. 1583 p.</p> <p>Plover C, Porrello E. Paediatric injectable guidelines 2019 ed. Flemington (Victoria): The Royal Children's Hospital Melbourne; 2019.</p> <p>British National Formulary. BNF for Children. 2018-19 ed. London, UK: BMJ Group and Pharmaceutical Press; 2018.</p>
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