

PARACETAMOL - Intravenous

Trade Name	Perfalgan												
Class	Antipyretic and analgesic.												
Mechanism of Action	Uncertain. Inhibits prostaglandin synthesis within the CNS. Acts peripherally by blocking pain impulse generation. Relieves fever by central action in hypothalamic heat regulating centre.												
Indications	Postoperative pain where the oral and rectal routes are not possible Postoperative pain when the onset of action from the rectal route is deemed to be too slow As an adjunct to opioid use to allow weaning of morphine Change to oral dosing as soon as possible												
Contraindications	Hypersensitivity to paracetamol Hepatic failure G6PD deficiency can lead to haemolytic anaemia												
Precautions	Caution in renal failure Caution with hepatocellular insufficiency Dehydration Clearance falls with unconjugated hyperbilirubinaemia												
Supplied As	10mg/mL in 100mL glass vials												
Dilution	Nil, can be diluted in 0.9% saline and 5% dextrose if needed												
Dosage/Interval	<table border="1"> <thead> <tr> <th>Postmenstrual GA</th> <th>Loading Dose (once only)</th> <th>Maintenance Dose</th> <th>Interval</th> </tr> </thead> <tbody> <tr> <td>≥ 37 wks</td> <td>20mg/kg</td> <td>10mg/kg/dose</td> <td>6 hourly</td> </tr> <tr> <td>28-36⁺⁶ wks</td> <td>20mg/kg</td> <td>7.5mg/kg/dose</td> <td>6 hourly</td> </tr> </tbody> </table> <p>Do not give regular iv paracetamol for longer than 4 days without an SMO review of the clinical situation</p> <p>If 28-31⁺⁶ wks check LFT and trough level at 48 hours If ≥ 32 wks check LFT and trough level on day 4</p> <p>Consider reducing the dose after 4 days if to continue Change to oral dosing as soon as possible Reduce the dose with hyperbilirubinaemia as this may suggest reduced hepatic conjugation and paracetamol clearance</p>	Postmenstrual GA	Loading Dose (once only)	Maintenance Dose	Interval	≥ 37 wks	20mg/kg	10mg/kg/dose	6 hourly	28-36 ⁺⁶ wks	20mg/kg	7.5mg/kg/dose	6 hourly
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Administration	Infusion over 15 minutes												
Compatible With	Sodium chloride 0.9% and 5% dextrose. Do NOT mix with other medications or IV fluids.												

Incompatible With	Enzyme inducers such as phenobarbitone, phenytoin, carbamazepine, isoniazid, zidovudine
Monitoring	<p>Day 2 or 4: LFT's and trough paracetamol level, review the dose and the need to continue iv therapy</p> <p>At any time: LFT's and trough paracetamol level if there are any concerns about toxicity or the patient is at high risk (renal, liver impairment, GA)</p> <p>Aim for a trough level < 60micromol/L* (equates to 10mg/L)</p>
Stability	If diluted, administer within 30 minutes. Vials are preservative free and are for single use only.
Storage	Do not store in the fridge Single use only Complete infusion within 1 hour of opening the vial
Adverse Reactions	<p>Pain at injection site</p> <p>Rash, fever, bone marrow depression</p> <p>Beware of accumulation if used regularly for > 48hrs</p> <p>Hepatotoxicity in neonates rare.</p> <p>Overdose: hepatotoxicity, renal tubular acidosis, metabolic acidosis, encephalopathy. Monitor LFT and coag profile and treat with n-acetylcysteine</p>
Metabolism	<p>100% bioavailability.</p> <p>Onset of pain relief within 5-10 mins, peak effect at 1 hour</p> <p>Metabolised in the liver by conjugation and metabolism by cytochrome P450. Excreted in the urine 90%</p>
Comments	<p>Licensed for use in term newborns.</p> <p>Safety and efficacy data have not been established on preterm infants</p> <p>See Neofax for treatment of serious overdose</p>
References	<ol style="list-style-type: none"> 1. Medsafe data sheet 2. *Princess Margaret Hospital Perth. Paracetamol protocol June 2008 3. Allegaert K et al. IV paracetamol pharmacokinetics in term + preterm infants. <i>European J Clin Pharm</i> 2004 60:191-7 4. Allegaert K et al. Pharmacokinetics of single dose iv propacetamol in neonates: effect of gestational age. <i>Arch Dis Fetal Neonatal Ed</i> 2004;89:F25-28. 5. Palmer GM et al.IV acetaminophen pharmacokinetics in neonates after multiple doses. <i>BJA</i> 2008;101:523-30. 6. Anderson BJ et al. Acetaminophen analgesia in children: placebo effect and pain resolution after tonsillectomy. <i>European J Clin Pharm</i> 2001;57:559-69. 7. Bartocci M, Lundeberg S. IV paracetamol: the "Stockholm protocol" for postoperative analgesia of term and preterm neonates. <i>Pediatr Anaesthesia</i> 2007;17, 111-21 8. Allegaert K et al. Not all iv paracetamol formulations are created equal... <i>Pediatr Anaesthesia</i> 2007;17, 809-18. 9. Anderson BJ, Allegaert K. IV neonatal paracetamol dosing: the magic of 10 days. <i>Pediatr Anaesthesia</i> 2009:289-95.
Updated By	<p>A Lynn, B Robertshawe, F Robertson May 2009, Sept 2009</p> <p>A Lynn, B Robertshawe June 2010, Dec 2012 (re-order profile)Remove D2 levels</p> <p>A Lynn, B Robertshawe June 2014 (decrease GA to 28 weeks)</p>

