

PARACETAMOL

Indication		<ul style="list-style-type: none"> Relief of pain and fever To achieve PDA closure in selected neonates¹ (at consultant discretion) 		
ORAL	Presentation	<ul style="list-style-type: none"> Oral solution 100 mg in 1 mL 		
	Dosage (pain management)	<ul style="list-style-type: none"> 15 mg/kg (frequency according to current gestational age in weeks)² 		
		Current gest age (weeks)	Frequency	Maximum (mg/kg/day)
		Less than 31+6	every 12 hours prn ¹	30 mg/kg/day ³
		32+0–36+6	every 8 hours prn ¹	45 mg/kg/day ⁴
37 or more	every 6–8 hours prn ²	60 mg/kg/day ³		
Dosage (PDA closure)	<ul style="list-style-type: none"> 15 mg/kg every 6 hours for three days^{1,5} <ul style="list-style-type: none"> Maximum 60 mg/kg/day 			
Preparation	<ul style="list-style-type: none"> Draw up prescribed dose in oral/enteral syringe 			
Administration	<ul style="list-style-type: none"> Oral/OGT/NGT 			
INTRAVENOUS	Presentation	<ul style="list-style-type: none"> Vial 500 mg in 50 mL 1000 mg in 100 mL 		
	Dosage (pain management)	<ul style="list-style-type: none"> 7.5 mg/kg every 6 hours to a maximum of 30 mg/kg/day⁶ 		
	Dosage (PDA closure)	<ul style="list-style-type: none"> 15 mg/kg every 6 hours for three days^{1,5} <ul style="list-style-type: none"> Maximum 60 mg/kg/day 		
	Preparation	<ul style="list-style-type: none"> Nil required 		
	Administration	<ul style="list-style-type: none"> IV infusion <ul style="list-style-type: none"> Draw up prescribed dose PLUS enough additional solution to prime infusion line Prime the infusion line and reduce total syringe volume to the prescribed dose IV infusion via syringe driver pump over 15 minutes^{6,7} On completion, disconnect syringe and infusion line Flush access port at same rate as infusion 		
RECTAL	Presentation	<ul style="list-style-type: none"> Use oral solution⁸ 100 mg in 1 mL 		
	Dosage (pain management)	<ul style="list-style-type: none"> 15 mg/kg (frequency according to current gestational age in weeks)² 		
		Current gest age (weeks)	Frequency	Maximum (mg/kg/day)
		Less than 31+6	every 12 hours prn	30 mg/kg/day ³
		32+0–36+6	every 8 hours prn	45 mg/kg/day
37 or more	every 6–8 hours prn	60 mg/kg/day ³		
Preparation	<ul style="list-style-type: none"> Nil required 			
Administration	<ul style="list-style-type: none"> Draw up prescribed dose PLUS enough additional solution to prime NGT Prime the NGT and reduce total syringe volume to prescribed dose Lubricate the insertion end of the NGT and insert 2 cm into rectum Slowly administer dose, holding baby's buttocks firmly together during administration and withdrawal of catheter to avoid expulsion of dose 			

Special considerations	<ul style="list-style-type: none"> • High risk medication <ul style="list-style-type: none"> ○ Overdose can lead to serious liver damage and death.⁶ Available in different strengths therefore check product selection carefully.⁷ Do not exceed maximum dosage⁷ • Multiple dosage regimens are recommended as efficacious and safe⁴ • Cautions <ul style="list-style-type: none"> ○ Hepatic or renal impairment, G6PD deficiency⁶, dehydration⁶, hypovolemia⁶ • At consultant discretion for PDA closure <ul style="list-style-type: none"> ○ Route choice (oral or IV) ○ Second course¹ • Use IV route for pain management only when other routes undesirable or not possible^{1,6} • Seek expert advice for IV use beyond 48 hours
Monitoring	<ul style="list-style-type: none"> • Liver function (at consultant discretion) • Temperature¹ • Signs of pain¹
Compatibility	<ul style="list-style-type: none"> • Oral solution <ul style="list-style-type: none"> ○ No information • Fluids with IV solution <ul style="list-style-type: none"> ○ 5% glucose (stable for one hour)⁷, 0.9% sodium chloride⁷ • Y site with IV solution <ul style="list-style-type: none"> ○ Cefoxitin⁷, ceftriaxone⁷, clindamycin⁷, dexamethasone⁷, droperidol⁷, fentanyl⁷, granisetron⁷, heparin sodium⁷, hydrocortisone sodium succinate⁷, hydromorphone⁷, lidocaine (lignocaine)⁷, methylprednisolone sodium succinate⁷, metoclopramide⁷, midazolam⁷, morphine sulfate⁷, ondansetron⁷, piperacillin-tazobactam⁷, potassium chloride⁷, ranitidine⁷, vancomycin⁷
Incompatibility	<ul style="list-style-type: none"> • Drugs with oral solution <ul style="list-style-type: none"> ○ No information • Drugs with IV solution <ul style="list-style-type: none"> ○ Aciclovir⁷, metronidazole⁷
Interactions	<ul style="list-style-type: none"> • IV solution <ul style="list-style-type: none"> ○ Probenecid: causes almost two-fold increase in blood level—reduce paracetamol dose⁶ ○ Caution with enzyme inducing agents (e.g. phenobarbitone, carbamazepine, phenytoin)⁶
Stability	<ul style="list-style-type: none"> • Store vial below 25 °C⁶. Do not refrigerate⁶. Protect from light⁶
Side effects	<ul style="list-style-type: none"> • Blood pathology: elevated bilirubin and hepatic enzymes • Hepatotoxicity¹ manifested first by clinical signs including vomiting, malaise, diaphoresis, and liver enlargement⁹
Actions	<ul style="list-style-type: none"> • Analgesic⁷ and antipyretic⁷ • Inhibits the peroxidase moiety of prostaglandin H2 synthetase complex, thereby reducing the production of prostaglandin E2, known to contribute to early ductal patency⁵
Abbreviations	OGT: oral gastric tube, NGT: nasogastric tube: PDA patent ductus arteriosus,
Keywords	PDA, patent ductus arteriosus, paracetamol, analgesic, acetaminophen

The Queensland Clinical Guideline *Neonatal Medicines* is integral to and should be read in conjunction with this monograph. Refer to the disclaimer. Destroy all printed copies of this monograph after use.

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