

DRUG DOSAGES IN PAEDIATRIC ANAESTHESIA

Antibiotics

Note:

Neonatal dosing to be used till post menstrual age (PMA) of 44 weeks.

PMA is equivalent to gestational age + postnatal age. For example, for a baby born at 28 weeks gestation and is now 21 days old, the PMA would be 31 weeks.

For PMA above 45 weeks, please refer to the dosing indicated for child.

All routes are intravenous (IV) unless otherwise specified.

PAEDIATRIC ANAESTHESIA

Drug	Dosing		Remarks
Amikacin	Neonates PMA ≤ 29 wk:		Infuse over 30-60min. Therapeutic levels: Target peak: 30-40 µg/ml Target trough: <10µg/ml (*ideal trough: 4-5µg/ml, especially if existing nephrotoxic drugs or poor renal function)
		≤ 7 days: 18mg/kg q48h 8-28 days: 15mg/kg q36h ≥ 29 days: 15mg/kg q24h	
	PMA 30-34 wk:		
		≤ 7 days: 18mg/kg q36h ≥ 8 days: 15mg/kg q24h	
	PMA 35-44wk: 15mg/kg q24h		
	Child:	15-22.5mg/kg/day q8-12h	
	Adult:	15mg/kg/day q8-12h (max 1.5g/day)	

PAEDIATRIC ANAESTHESIA

Drug	Dosing		Remarks
Ampicillin	Neonates:	50mg/kg/dose, interval depends on PMA	
		PMA \leq 29 wk: (\leq 28 days: q12h, $>$ 28 days: q8h)	
		PMA 30-36wk: (\leq 14 days: q12h, $>$ 14 days: q8h)	
		PMA 37-44wk: (\leq 7 days: q12h, $>$ 7 days: q8h)	
	Child:	25-37.5mg/kg/dose q6h	
		50mg/kg for single dose cardiac prophylaxis	
Augmentin	Neonates:	$<$ 7 days: 30mg/kg q12h (based on Co-amoxiclav) \geq 7 days: 30mg/kg q8h (based on Co-amoxiclav)	
	Child:	30mg/kg/dose q8h (up to 40mg/kg/dose q8h)	

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Drug	Dosing		Remarks
Cefazolin	Neonates:	25mg/kg/dose < 2kg: (≤ 7 days q12h; > 7 days q12h) > 2kg: (≤ 7 days q12h; > 7 days q8h)	
	Child:	25-30mg/kg/dose q6-8h	
Ceftazidime	Neonates:	50mg/kg/dose, interval depends on PMA	
		PMA ≤ 29 wk: (≤ 28 days: q12h, > 28 days: q8h)	
		PMA 30-36wk: (≤ 14 days: q12h, > 14 days: q8h)	
		PMA 37-44wk: (≤ 7 days: q12h, > 7 days: q8h)	
	Child:	30-50mg/kg/dose q8h for mild-moderate infections 60-100mg/kg/dose q8h for severe infections/ meningitis	

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Drug	Dosing		Remarks
Ceftriaxone	Neonates:	$<2\text{kg}$: 50mg/kg/dose q24h $\geq 2\text{kg}$: (≤ 7 days) 50mg/kg/dose q24h $(> 7$ days) 75mg/kg/dose q24h	
	Child:	25-50mg/kg q12-24h 100mg/kg/day q12-24h for meningitis (max 2g q12h)	
Ciprofloxacin	Child:	10-15mg/kg/dose q12h	
Clindamycin	Neonates:	5mg/kg/dose, interval depends on PMA	
		PMA ≤ 29 wk: (≤ 28 days: q12h, >28 days: q8h)	
		PMA 30-36wk: (≤ 14 days: q12h, >14 days: q8h)	
		PMA 37-44wk: (≤ 7 days: q12h, >7 days: q8h)	
	Child:	5mg/kg/dose q6-8h	

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	Adult:	600mg-1.2g/day	
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Drug	Dosing		Remarks
Cloxacillin	Neonates:	< 2kg: (≤ 7 days) 50mg/kg q12h (> 7 days) 50mg/kg q8h > 2kg: (≤ 7 days) 50mg/kg q8h (> 7 days) 50mg/kg q6h	
	Child:	25mg/kg/dose q6h 50mg/kg/dose q6h in meningitis	
Erythromycin	Neonates:	10mg/kg/dose < 1kg: (≤ 14 days q12h; 15-28 days q8h) ≥ 1 kg: (≤ 7 days q12h; 8-28 days q8h)	IV infusion over 30-60min.
	Child:	10-12.5mg/kg/day q6h	

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Drug	Dosing		Remarks
Gentamicin	Neonates PMA \leq 29 wk:		Infuse over 30-60min. Do not mix with ampicillin.
		\leq 7 days: 5mg/kg q48h 8-28 days: 4mg/kg q36h \geq 29 days: 4mg/kg q24h	<u>Therapeutic levels:</u> Target peak: 8-10 μ g/ml
	PMA 30-34 wk:		Target trough: <2 μ g/ml
		\leq 7 days: 4.5mg/kg q36h \geq 8 days: 4mg/kg q24h	(ideal trough: <1 μ g/ml, especially if nephrotoxic
	PMA 35-44wk: 4mg/kg q24h		drugs or poor renal function)
	Child:	2-2.5mg/kg q8h 5mg/kg q24h for uncomplicated UTI over 1month old	
Imipenem	Child:	15-25mg/kg q6h (max 4g/day)	May cause convulsions, adjust dose in renal dysfunction

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Drug	Dosing		Remarks
Meropenem	Neonate:	20mg/kg/dose, interval depends on PMA	
		PMA < 32wk: (\leq 14 days: q12h, >14 days: q8h)	
		PMA \geq 32wk: (\leq 7 days: q12h, >7 days: q8h)	
	Child:	20mg/kg q8h 40mg/kg q8h for meningitis	
Metronidazole	Neonate:	Loading dose 15mg/kg Maintenance dose 7.5mg/kg/dose, dosing interval depending on PMA	
		PMA \leq 29 wk: (\leq 28 days: q48h, >28 days: q24h)	
		PMA 30-36wk: (\leq 14 days: q24h, >14 days: q12h)	
		PMA 37-44wk: (\leq 7 days: q24h, >7 days: q12h)	

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	Child:	7.5-10mg/kg q6-8h	
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Drug	Dosing		Remarks
Piperacillin/ Tazobactam (Tazocin)	Neonates:	50-100mg (piperacillin) /kg/dose	
		PMA \leq 29 wk: (\leq 28 days: q12h, $>$ 28 days: q8h)	
		PMA 30-36wk: (\leq 14 days: q12h, $>$ 14 days: q8h)	
		PMA 37-44wk: (\leq 7 days: q12h, $>$ 7 days: q8h)	
	Child:	$<$ 2 months: 80mg Piperacillin /kg/dose q8h	
		\geq 2 months: 80mg Piperacillin /kg/dose q6h	

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Drug	Dosing		Remarks
Vancomycin	Neonates:	15mg/kg/dose	Each dose to be infused over 60min.
		PMA \leq 29 wk: (\leq 14 days: q18h, >14 days: q12h)	
		PMA 30-36wk: (\leq 14 days: q12h, >14 days: q8h)	
		PMA 37-44wk: (\leq 7 days: q12h, >7 days: q8h)	<u>Therapeutic levels:</u> Peak: 30-40 μ g/ml Trough: 15-20 μ g/ml (complicated infections); 10-15 μ g/ml (others)
	Child:	15mg/kg/dose q6h	
	Adult:	2-4g/day q6-12h	

References:

1. KKH Neonatal Drug Dosing Booklet, 3rd edition (2014), available on KKH intranet
2. KKH Paediatric Medicine Clinical Guidelines, Appendix - Drugs – Infections (March 2015), available on KKH intranet