

# Neonatal and Pediatric Drug Doses



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## Antimicrobials

Drug	Conc.	Neonatal Dose	Pediatric Dose
<b>Acyclovir (Zovirax®)</b>	<b>Susp:</b> 200 mg/5mL <b>Vial:</b> 250 mg/5mL 500 mg powder	<b>Premature infants :I.V.:</b> 20 mg/kg/dose every 12 hours for 14-21 days <b>Full term I.V.:</b> 20 mg/kg/dose every 8 hours for 14-21 days	20 mg/kg/dose every 8 hours for 14-21 days
<b>IV administration</b>	250 mg/5 ml → 1 mL + 9 mL NS → 1mL has 5mg 500 mg+10 mL sterile water for injection <b>Then</b> take 1 mL + 9 mL NS → 1mL has 5mg <b>Therefore</b> the dose will be <b>4 ml of the reconstituted soln./kg/dose IV</b> infusion by syringe pump over 1 hr. The soln is stable for <b>24 hr in room temp. DO NOT REFRIGERATE</b>		
<b>Amikacin (Amikin®)</b>	100mg/2ml 250mg/2ml 500mg/2ml	<b>Body weight ≤2kg:</b> <b>PNA ≤7 days:</b> 15 mg/kg/dose every 48 hrs in neonates <1 kg, the dosing interval may be extended through the first 2 weeks of life <b>PNA 8-28 days :</b> 15 mg/kg/dose every 24 hrs  <b>Body weight &gt;2 kg</b> <b>PNA ≤7 days:</b> 15 mg/kg/dose every 24 hr <b>PNA 8-28 days:</b> 15mg/kg/dose every 12-24 hrs	15-22.5 mg/kg/day divided every 8hr
<b>IV administration</b>	100 mg/2 mL → 1 mL + 9 mL NS → 1mL has 5mg 500 mg/2 mL → 1 mL + 4 mL NS <b>Then</b> take 1 mL + 9 mL NS → 1mL has 5mg <b>Therefore</b> the dose will be <b>3 ml of the reconstituted soln./kg/dose IV</b> infusion over 30 min. The soln is stable for <b>24 hr at room temp and 48 hr in refrigerator</b>		

Drug	Conc.	Neonatal Dose			Pediatric Dose	
<b>Ampicillin/ sulbactam in a 2:1 ratio</b> (Unasyn <sup>®</sup> , Unictam <sup>®</sup> )	1.5g/vial	25-50 mg/kg/dose			<b>Mild to moderate infection:</b> 100-150 mg/kg/day divided every 6 hours <b>Severe Infection:</b> 200-400mg/kg/day divided every 6 hours	
		<b>Group B streptococcal infections:</b> 150-200 mg/kg/day for <i>bacteremia</i> 300-400 mg/kg/day for <i>meningitis</i>				
		<b>PMA (weeks)</b>	<b>PNA (days)</b>	<b>Interval (hr)</b>		
		≤29	0-28 >28	12 8		
		30-36	0-14 >14	12 8		
		37-44	0-7 >7	12 8		
		≥45	All	6		
<b>IV administration</b>	1.5 g + 10 mL NS → 1 mL soln has 150 mg <b>Therefore</b> if the dose is 150mg/kg/day, use ½ mL/kg/dose The reconstituted soln is stable for <b>4 hr</b> in <b>refrigerator</b>					
<b>Amoxicillin /clavulanate</b> (Augmentin <sup>®</sup> , Deltaclav <sup>®</sup> )	<b>Susp:</b> 62.5/1ml (50mg amoxicillin) 156mg/5ml (125mg amoxicillin) 312mg/5ml (250 mg amoxicillin) 457mg/5ml (400mg amoxicillin) Vial: 600mg 1200mg	30 mg (amoxicillin component) /kg/day divided every 12 hours			<b>Infants 1-3 months:</b> 30 mg (amoxicillin component) /kg/day divided every 12 hours  <b>Infants, Children &gt;3 months:</b> 20-40 mg (amoxicillin component) /kg/day in divided doses every 8 hours  <b>Acute otitis media:</b> 80-90 mg /kg /day divided every 12hr for 10 days.	
<b>IV administration</b>	600 mg + 10 mL NS → 1 mL has 50 mg amoxicillin component 1200 mg + 20 mL NS → 1 mL has 50 mg amoxicillin component					

Drug	Conc.	Neonatal Dose	Pediatric Dose
<b>Azithromycin</b> (Zithromax <sup>®</sup> , Zisrocin <sup>®</sup> )	<b>Susp.</b> 200 mg /5mL	<b>Treatment and prophylaxis of pertussis infections :</b> 10 mg /kg/dose once daily for 5 days	<b>Infants 1-5 months:</b> 10 mg /kg once daily for 5 days. <b>Children ≥6 months:</b> <b>Three-day regimen:</b> 10 mg/kg (maximum dose: 500 mg/day) once daily for 3 days <b>Five-day regimen:</b> 10 mg/kg on (day 1) (maximum dose: 500 mg), followed by 5 mg/kg (maximum dose: 250 mg/day) once daily on days 2-5 <b>Children ≥2years:</b> 12mg/kg/day (maximum dose: 500 mg/day) once daily for 5 days
<b>Cefipime</b> (maxipeme <sup>®</sup> )	1g/vial	<b>PNA &lt;14 days:</b> 30 mg/kg/dose every 12 hours <b>PNA ≥14 days:</b> 50 mg/kg/dose every 12 hour	50 mg/kg/dose (maximum dose: 2 g) every 12 hours <b>Febrile neutropenic patients:</b> 50 mg/kg/dose (maximum dose: 2 g) every 8 hours for 7 days or until neutropenia resolves
<b>IV administration</b>	1 g + 10 mL NS → 1 mL has 100 mg <b>Therefore</b> if the dose is 100 mg/kg/day, use $\frac{1}{2}$ mL/kg/dose IV The soln is stable for <b>24hr</b> at <b>room temp</b> and <b>7days</b> in <b>refrigerator</b>		

Drug	Conc.	Neonatal Dose	Pediatric Dose
<b>Cefoperazone</b> (Cefobid <sup>®</sup> , Cefazone <sup>®</sup> )	1g/vial	I.V 25-100mg/kg /day divided every 12hr	
<b>IV administration</b>	1 g + 10 mL NS → 1 mL has 100 mg <b>Therefore</b> if the dose is 100 mg/kg/day, use ½ mL/kg/dose The soln is stable for <b>24hr</b> at <b>room temp</b> and <b>5days</b> in <b>refrigerator</b>		
<b>Cefotaxime</b> (Claforan <sup>®</sup> , Cefotax <sup>®</sup> )	500 mg/vial 1g /vial	<b>0 -2 week:</b> 100mg/kg/day divided every 12hr <b>&gt;2weeks:</b> 50mg/kg/dose every 8hr	<b>Mild to moderate infection &lt;12 yr:</b> 50-180mg/kg/day divided every 6-8 hr. <b>Severe infection &lt;12:</b> 200mg/kg/day divided every 6-8 hr, up to 300mg/kg/day used in meningitis. max.12g/day
<b>IV administration</b>	1 g + 10 mL NS → 1 mL has 100 mg <b>Therefore</b> if the dose is 100 mg/kg/day, use ½ mL/kg/dose The soln is stable for <b>24hr</b> at <b>room temp</b> and <b>7days</b> in <b>refrigerator</b>		
<b>Ceftazidime</b> (Fortum <sup>®</sup> , Cefzim <sup>®</sup> )	1g/vial	100 mg/kg/day divided every 12 hours	100-150 mg/kg/day divided every 8 hours; Maximum dose: 6 g/day
<b>IV administration</b>	1 g + 10 mL NS → 1 mL has 100 mg <b>Therefore</b> if the dose is 100 mg/kg/day, use ½ mL/kg/dose The soln is stable for <b>12hr</b> at <b>room temp</b> and <b>3days</b> in <b>refrigerator</b>		
<b>Ceftriaxone</b> (Rocephin <sup>®</sup> , Cefaxone <sup>®</sup> )	1g/vial	50-75 mg/kg/day divided every 12-24 hours <b>Meningitis:</b> 100mg/kg/day every 12-24 hrs for 7-14 days.	
<b>IV administration</b>	1 g + 10 mL NS → 1 mL has 100 mg <b>Therefore</b> if the dose is 50 mg/kg/day, use ½ mL/kg/day The soln is stable for <b>48 hr</b> at <b>room temp</b> and <b>10 days</b> in <b>refrigerator</b>		

Drug	Conc.	Neonatal Dose	Pediatric Dose
<b>Ciprofloxacin</b>	200 mg/20mL	6-10 mg/kg twice daily	6-10 mg/kg every 8 hr
<b>IV administration</b>	2 mL+ 9 mL NS → 1 mL has 2mg <b>Therefore</b> the dose is 3-5 mL/kg/dose		
<b>Clarithromycin</b> (Klacid <sup>®</sup> , Klarimix <sup>®</sup> )	<b>Susp.</b> 125mg/5mL 250mg/5mL	7.5 mg/kg twice daily	<p><b>Child 1 month–12 years</b></p> <p><b>Body-weight under 8 kg</b> 7.5 mg/kg twice daily</p> <p><b>Body-weight 8–11 kg</b> 62.5 mg twice daily</p> <p><b>Body-weight 12–19 kg</b> 125 mg twice daily</p> <p><b>Body-weight 20–29 kg</b> 187.5 mg twice daily</p> <p><b>Body-weight 30–40 kg</b> 250 mg twice daily</p> <p><b>Child 12–18 years</b> 250 mg twice daily for 7 days, increase in severe infections to 500 mg every 12 hrs for up to 14 days</p>
<b>Erythromycin</b> (Erythrocin <sup>®</sup> )	<b>Susp.</b> 200mg/5mL	10mg/kg/dose every 6 hr <b>Treatment and prophylaxis of pertussis:</b> 12.5mg/kg/dose orally every 6 hours for 14 days <b>Treatment of feeding intolerance due to dysmotility:</b> 10mg/kg/dose orally every 6 hrs for 2 days then 4mg/kg/dose every 6 hrs for 5 days	<p><b>Child 1 month–2 years</b> 125 mg 4 times daily; dose doubled in severe infections</p> <p><b>Child 2–8 years</b> 250 mg 4 times daily; dose doubled in severe infections</p> <p><b>Child 8–18 years</b> 250–500 mg 4 times daily; dose doubled in severe infections</p> <p><b>Note</b> Total daily dose may be given in 2 divided doses.</p>



Drug	Conc.	Neonatal Dose				Pediatric Dose
Fluconazole (Diflucan®)	Vial: 100mg/ 50mL	<b>Invasive candidiasis:</b> <b>Loading dose:</b> 12-25mg/kg <b>Maintenance dose:</b> <b>GA &lt;29 week:</b> <b>PNA 0-14 days:</b> 6-12 mg /kg every 48 hr <b>PNA &gt;14days:</b> 6-12 mg/ kg every 24 hr <b>GA 30 week and older:</b> <b>PNA 0-7 days:</b> 6-12mg/kg every 48 hr <b>PNA &gt;14days:</b> 6-12 mg/ kg every 24 hr <b>Prophylaxis:</b> 3-6 mg/kg twice weekly <b>Thrush:</b> <b>loading dose:</b> 6mg/kg <b>Maintenance dose:</b> 3mg/kg q 24hrs				<b>Loading dose:</b> 6-12mg /kg/dose <b>Maintenance dose:</b> 3-12mg/kg/dose once daily <b>Maximum daily dose:</b> 600mg/day
	Oral: 5mg/mL					
<b>IV administration</b>	2 mg/mL may be given undiluted or diluted with equal volume of D5W IV infusion by syringe pump over 30 min Stable for <b>7 days</b> at <b>room temp. DO NOT REFRIGERATE</b>					
Gentamicin (Garamycin®, Gentamicin®)	80mg/ 2mL	<b>PMA</b> (weeks)	<b>PNA</b> (days)	<b>Dose</b> (mg/kg)	<b>Interval</b> (hr)	<b>3 months to &lt;2 years:</b> 9.5 mg/kg/dose every 24 hr <b>2 year to &lt;8 years:</b> 8.5 mg/kg/dose every 24 hr <b>≥8 years:</b> 7 mg/kg/dose every 24 hours
		≤29	0-7 8-28 ≥29	5 4 5	48 36 24	
		30-34	0-7 ≥8	4.5 4	36 24	
		≥35	All	4	24	
<b>IV administration</b>	1 mL + 9 mL NS (4 mg/mL) <b>Therefore</b> if the dose is 4 mg/kg/day, use <b>1 mL/kg/dose</b> and complete the final vol. to 50mL and give by IV infusion with syringe pump over 30 min					



Drug	Conc.	Neonatal Dose	Pediatric Dose
<b>Imipenem/ cilastatin (Tienam®)</b>	500mg/vial	<b>Body weight ≤2 kg:</b> <b>PNA ≤7 days:</b> 20mg/kg/dose every 12 hrs <b>PNA 8-28 days:</b> 25mg/kg/dose every 12 hrs. <b>Body weight &gt;2kg</b> <b>PNA ≤7 days:</b> 25 /kg/dose every 12 hr <b>PNA 8-28 days:</b> 25mg/kg/dose every 8 hr	100 mg/kg/day divided every 6 hours
<b>IV administration</b>	500 mg + 10 mL NS (50 mg/1 mL) <b>Then</b> 1 mL + 9 mL NS → 1mL has 5 mg <b>Therefore</b> if the dose is 20 mg/kg/dose, use 4 mL/kg/dose IV infusion over 30 min. Stable for 4 hr at room temp. and 24 hr in refrigerator		
<b>Meropenem (Meronem®)</b>	500mg/vial 1g /vial	<b>Sepsis: IV.</b> <b>GA &lt; 32 weeks:</b> <b>PNA 0-14 days:</b> 20mg/kg/dose every 12 hrs. <b>PNA &gt; 14 days:</b> 20mg/kg/dose every 8 hrs <b>GA ≥ 32 weeks:</b> <b>PNA 0-7 days:</b> 20mg/kg/dose every 12 hrs <b>PNA &gt; 7 days:</b> 20mg/kg/dose every 8 hrs <b>Meningitis and infections caused by Pseudomonas species :</b> 40mg/kg/dose every 8 hrs	<b>≤ 50 kg:</b> 20 mg/kg/dose every 8 hrs, not exceed 1g every 8hrs. <b>&gt;50 kg :</b> 1g/dose every 8hrs <b>meningitis:</b> <b>≤ 50 kg:</b> 40 mg/kg/dose every 8 hrs, not exceed 2g every 8hrs. <b>&gt;50 kg :</b> 2g/dose every 8hrs
<b>IV administration</b>	500 mg + 10 mL NS (50 mg/1 mL) <b>Then</b> 1 mL + 9 mL NS → 1mL has 5 mg <b>Therefore</b> if the dose is 20 mg/kg/dose, use 4 mL/kg/dose IV infusion over 30 min. Stable for 2 hr at room temp. and 12 hr in refrigerator		

Drug	Conc.	Neonatal Dose			Pediatric Dose
<b>Metronidazole</b> (Flagyl®)	<b>Vial:</b> 500mg/100mL <b>Oral:</b> 125mg/5mL <b>Amrizole®</b> <b>syp:</b> 200mg/5mL eq. to 125 mg	<b>Loading dose:</b> 15 mg/kg <b>Maintenance dose:</b> 7.5 mg/kg/dose. Begin one dosing interval after loading dose			<b>Anaerobic infections:</b> Oral, I.V.: 30 mg/kg/day in divided doses every 6 hours <b>Maximum dose:</b> 4 g/day
		<b>PMA</b> (weeks)	<b>PNA</b> (days)	<b>Interval</b> (hr)	
		≤29	0-28 >28	48 24	
		30-36	0-14 >14	24 12	
		37-44	0-7 >7	24 12	
		≥45	All	8	
		<b>IV administration</b>	5 mg/mL, <b>therefore</b> the maintenance dose is 1.5 mL/kg/dose may be given undiluted or diluted with equal volume of D5W IV infusion by syringe pump over 60 min. <b>DO NOT REFRIGERATE</b>		
<b>Vancomycin</b> (Vancocin®, Vancomix®)	500mg/vial	<b>Bacteremia:</b> 10 mg/kg/dose <b>Meningitis:</b> 15 mg/kg/dose			40-60 mg/kg/day divided every 6-8 hours <b>Maximum daily dose:</b> 4000 mg/day
		<b>PMA</b> (weeks)	<b>PNA</b> (days)	<b>Interval</b> (hr)	
		≤29	0-14 14	18 12	
		30-36	0-14 14	12 8	
		37-44	0-7 7	12 8	
		≥45	All	6	
<b>IV administration</b>	500 mg + 10 mL NS (50 mg/1 mL) <b>Then</b> 1 mL + 9 mL NS → 1mL has 5 mg <b>Therefore</b> if the dose is 15 mg/kg/dose, use 3 mL/kg/dose IV infusion over 60 min. Stable for 1 hr at room temp. and 4 days in refrigerator				

## Cardiovascular drugs

Drug	Conc.	Neonatal Dose	Pediatric Dose
<b>Adrenaline</b>	1mg/mL	<p><b>Cardiopulmonary resuscitation (CPR)</b>  <b>I.V.:</b>                      0.01-0.03 mg/kg every 3-5 minutes as needed</p> <p><b>Endotracheal:</b>                      0.05-0.1 mg/kg every 3-5 minutes</p> <p><b>Continuous infusion:</b>                      start at 0.1mcg/kg/min and adjust to desired response; to a maximum of 1mcg/kg/min</p> <p><b>Max. IV conc:</b>                      1mg/50 ml</p>	<p><b>Asthma, bronchodilation:</b>                      0.5 mL diluted with 3-5 mL of NS; administer with jet nebulizer over ~15 minutes every 3-4 hours as needed.</p> <p><b>A systole or pulseless arrest :</b>  <b>I.V., I.O.:</b> 0.01 mg/kg every 3-5 minutes until return of spontaneous circulation.</p> <p><b>Croup (laryngotracheobronchitis), airway edema:</b>                      0.05-0.1 mL/kg (maximum dose: 0.5 mL) diluted in 2 mL NS, may repeat dose every 20 minutes</p> <p><b>Hypersensitivity reactions:</b>  <b>I.M., SC:</b> 0.01 mg/kg (0.01 mL/kg/dose not to exceed 0.3-0.5 mg every 5-15 minutes</p>
<b>IV administration</b>	1 mL + 9 mL NS → 1mL has 0.1 mg <b>Therefore</b> the CPR IV dose is 10-30 units/kg/dose with 100 units insulin syringe		

Drug	Conc.	Neonatal Dose	Pediatric Dose
<b>Alprostadil (Prostaglandin E1)</b>	500mcg/1 mL	<p><b>For Maintaining patency of the ductus arteriosus</b></p> <p><b>Initial dose:</b> 0.05-0.1 mcg/kg/min by continuous IV infusion Titrate according to the infants response.</p> <p><b>Maintenance dose:</b> May be as low as 0.01 mcg/kg/min</p> <p><b>Administration:</b> -Dilute 150 micrograms/kg bodyweight to a final volume of 50 mL with Glucose 5% or Sodium Chloride 0.9%; -An intravenous infusion rate of 0.1 mL/hour provides a dose of 0.05 mc/kg/ minute.</p>	
<b>IV administration</b>	Dilute to a conc not more than 20 mcg/mL. Prepare fresh soln every 24 hr. Extravasation may cause tissue sloughing & necrosis		
<b>Amiodarone (Cordarone®)</b>	<p><b>Vial:</b> 150 mg/ 3mL</p> <p><b>Oral:</b> 200 mg</p>	<p><b>IV Loading dose:</b> 5 mg/kg IV infusion over 30-60 min., preferably in central vein.</p> <p><b>Maintenance infusion:</b> 7-15 mcg/kg/min, begin at 7mcg/kg and titrate by monitoring effects.</p> <p><b>NB:</b> Consider switching to oral therapy within 24-48 hrs.</p> <p><b>Oral Dose:</b> 5-10 mg/kg/dose every 12 hrs</p>	<p><b>IV Loading dose:</b> 5–10 mg/kg over 20 min–2 hours.</p> <p><b>Maintenance infusion:</b> 300 mcg/kg/hour, increased according to response to max.1.5mg/kg/hour; do not exceed 1.2 g in 24 hours.</p>
<b>IV administration</b>	<p>-IV administration via central venous catheter recommended if repeated or continuous infusion required, as infusion via peripheral veins may cause pain and inflammation.</p> <p>-For IV infusion, dilute to a concentration of not less than 600 mcg/mL with Glucose 5% &amp; infuse over 30-60 min</p> <p><b>INCOMPATIBLE WITH SODIUM CHLORIDE INFUSION.</b></p>		

Drug	Conc.	Neonatal Dose	Pediatric Dose
<b>Atropine</b>	1mg/ml	<p><b>Bradycardia:</b> Note: Not part of neonatal resuscitation algorithm; some institutions have used the following:</p> <p><b>IV., I.M.:</b> 0.01-0.03 mg/kg/dose; can be repeated every 10-15 minutes with maximum of 0.04mg /kg</p> <p><b>Endotracheal:</b> 0.01 -0.03 mg/kg/dose; immediately follow by 1ml NS.</p>	<p><b>Bradycardia:</b> <b>I.V.,I.O.:</b> 0.02mg/kg/dose; minimum dose recommended 0.1 mg; however, use of a minimum dosage of 0.1 mg in patients &lt;5 kg will result in dosages &gt;0.02 mg/kg and is not recommended.</p> <p><b>Maximum single dose:</b> 0.5 mg; may repeat once in 3-5 minutes;</p> <p><b>Maximum total dose:</b> 1 mg</p> <p><b>Endotracheal:</b> 0.04-0.06 mg/kg/dose; may repeat once if needed</p>
<b>Captopril (Capoten®)</b>	25mg/tab	<p><b>PO:</b> Initial dose 0.01-0.05 mg/kg/dose every 8-12 hours; titrate dose up to 0.5 mg/kg/dose given every 6-24 hours.</p> <p><b>Maximum dose:</b> 2 mg/kg daily in divided doses</p> <p>Administer 1 hour before feeding.</p>	<p><b>Test dose:</b> 100 mcg/kg (max. 6.25 mg), monitor blood pressure carefully for 1–2 hours;</p> <p><b>If tolerated:</b> give 100–300 mcg/kg 2–3 times a day.</p> <p><b>Maximum dose:</b> 6 mg/kg daily in divided doses (max. 4 mg/kg daily in divided doses for child 1 month–1 yr)</p>

Drug	Conc.	Neonatal Dose	Pediatric Dose			
<b>Digoxin</b> (Lanoxin <sup>®</sup> , Cardixin <sup>®</sup> )	<b>Amp:</b> 0.5mg/1mL <b>Oral:</b> 0.25 mg	<b>Total loading dose</b>		<b>Child 1 month–2 years:</b> Initially 45 mcg/Kg in 3 divided doses for 24 hours then 10 mcg/kg daily in 1–2 divided doses.  <b>Child 2–5 years:</b> Initially 35 mcg/kg in 3 divided doses for 24 hours then 10 mcg/kg daily in 1–2 divided doses  <b>Child 5–10 years:</b> Initially 25 mcg/kg (max. 750 mcg) in 3 divided doses for 24 hours then 6 mcg/kg daily(max. 250 mcg daily) in 1–2 divided doses  <b>Child 10–18 years:</b> Initially 0.75–1.5 mg in 3 divided doses for 24 hours then 62.5–250 mcg daily in 1–2 divided doses (higher doses may be necessary)		
		<b>PMA weeks</b>	<b>IV mcg/Kg</b>		<b>PO mcg/Kg</b>	
		≤29	15		20	
		30-36	20		25	
		37-48	30		40	
		≥49	40		50	
		Divide into 3 doses over 24 hrs				
		<b>Maintenance dose</b>				
		<b>PMA weeks</b>	<b>IV mcg/Kg</b>		<b>PO mcg/Kg</b>	<b>Interval Hrs</b>
		≤29	4		5	24
30-36	5	6	24			
37-48	4	5	12			
≥49	5	6	12			
Titrate based on clinical response						
<b>IV administration</b>	1 mL + 9 mL NS → 1 mL has 50 mcg Use diluted soln immediately					
<b>Dobutamine</b> (Dobutrex <sup>®</sup> )	250mg/ 5mL <b>OR</b> 250/20mL	<b>Continuous IV infusion:</b> 2-25 mcg/kg/min, titrate to desired response.		<b>Continuous IV infusion:</b> 2-25 mcg/kg/min ,titrate to desired response, <b>Maximum dose:</b> 40 mcg/kg/min		

Drug	Conc.	Neonatal Dose	Pediatric Dose
<b>Dopamine</b>	200mg/5ml	<p><b>Continuous I.V. infusion:</b> 1-20 mcg/kg/minute; titrate to desired response</p> <p><b>The hemodynamic effects of dopamine are dose-dependent:</b></p> <p><b>Low dosage:</b> 1-5 mcg/kg/minute, increased renal blood flow and urine output</p> <p><b>Intermediate dosage:</b> 5-15 mcg/kg/minute, increased renal blood flow, heart rate, cardiac contractility, cardiac output, and blood pressure.</p> <p><b>High dosage:</b> &gt;15 mcg/kg/min., alpha-adrenergic effects begin to predominate, vasoconstriction, increased blood pressure</p>	
<p><b>Dopamine/Dobutamine dose by mL/50 mL syringe calculation:</b></p> $\frac{3 \times \text{body wt. (Kg)} \times \text{desired dose (mcg/kg/min)}}{\text{Desired fluid rate (mL/hr)} \times \text{conc of the amp. (mg/mL)}}$			
<b>Enoxaparin (Clexan®)</b>	100 mg/mL As 20mg/0.2mL 40mg/0.4mL 60mg/0.6mL 80mg/0.8mL 100mg/1mL	<p><b>Treatment of thrombotic episodes:</b></p> <p><b>For Full term neonates:</b> 1.7mg/kg/dose SC every 12 hrs</p> <p><b>For Preterm neonates:</b> 2mg/kg/dose SC every 12 hrs</p> <p><b>Prophylaxis dose:</b> 750 mcg/kg every 12 hrs</p>	<p><b>Treatment of thrombotic episodes:</b></p> <p><b>Child 1–2 months:</b> 1.5 mg/kg twice daily</p> <p><b>Child 2 months–18 years:</b> 1 mg/kg twice daily</p> <p><b>Prophylaxis dose:</b></p> <p>Child 1–2 months: 750 mcg/kg twice daily</p> <p>Child 2 months–18 years: 500 mcg/kg twice daily; max. 40 mg daily</p>



Drug	Conc.	Neonatal dose	Pediatric dose
<b>Furosemide</b> (Lasix®)	<b>Amp.:</b> 40mg/4ml  <b>tab.:</b> 40 mg	<b>Initial dose:</b> 1 mg/kg IV slow push, IM or orally, may increase to maximum of 2 mg/kg/dose IV or 6 mg/kg/dose orally <b>Initial intervals:</b> <i>Premature infant:</i> q24 hr <i>Full-term infant:</i> q12 hr Consider alternate-day therapy for long term use <b>Continuous I.V. infusion:</b> 0.2 mg/kg/hour, increase in 0.1 mg/kg/hour increments every 12-24 hours to a maximum infusion rate of 0.4 mg/kg/hr. <b>Pulmonary edema:</b> Inhalation: 1-2 mg/kg/dose diluted in 2 mL NS as a single dose.	<b>Infants and Children:</b> <b>Oral:</b> 2 mg/kg once daily; if ineffective, may increase in increments of 1-2 mg/kg/dose every 6-8 hours; not to exceed 6 mg/kg/dose. In most cases, it is not necessary to exceed individual doses of 4 mg/kg or a dosing frequency of once or twice daily <b>I.M., I.V.:</b> 1-2 mg/kg/dose every 6-12 hr <b>Continuous infusion:</b> 0.05 mg/kg/hour; titrate dosage to clinical effect.
<b>IV administration</b>	May be given diluted or undiluted. 1 mL+ 9mL N.S → 1mL has 1 mg <b>THE INJECTABLE SOLN MAY BE GIVEN ORALLY</b>		
<b>Heparin</b>	5000 I.U/ 1 mL	<b>Treatment of thrombosis:</b> 75 units/kg bolus over 10min.then 25 units/kg/hr continuous infusion. Measure APTT after 4 hrs and adjust the dose to achieve APTT of 60-85sec. Treatment should be limited to 10-14 days. Switching to LMWT heparins after 3-5 days is recommended	<b>Treatment of thrombosis:</b> <b>Child 1 month–1 year:</b> initially 75 units/kg by IV injection, then by continuous IV infusion 25 units/kg/hour, adjusted according to APTT. <b>Child 1–18 years:</b> Initially 75 units/kg by IV injection, then by continuous IV infusion 20 units/kg/hour, adjusted according to APTT.

Drug	Conc.	Neonatal dose	Pediatric dose		
<b>Hydralazine</b>	<b>Amp.:</b> 20mg/1mL <b>Tab.:</b> 50 mg	<b>Slow IV dose:</b> 0.1-0.5 mg/kg/dose every 6-8 hrs. Dose may be gradually increased as required for blood pressure control to a max. 2 mg/kg/dose every 6 hrs <b>Oral dose:</b> 0.25-1 mg/kg/dose every 6-8 hrs Administer with food to enhance absorption	<b>Slow IV dose</b> <b>Child 1 month–12 year:</b> 0.1-0.5 mg/kg every 4–6 hours max.3 mg/kg daily (not exceeding 60 mg daily) <b>Child 12–18 years:</b> 5–10 mg repeated every 4–6hr <b>Oral dose:</b> <b>Child 1 month–12 years:</b> 0.25-0.5 mg/kg every 8–12 hours max. 7.5 mg/kg daily (not exceeding 200 mg daily) <b>Child 12–18 years:</b> 25 mg twice daily, increased to usual max. 50–100 mg twice daily.		
<b>IV administration</b>	0.5 mL+ 9.5 mL N.S → 1 mL has 1 mg				
<b>Ibuprofen (Brufen® syrup)</b>	100mg/5ml	<b>Closure of PDA :</b> <b>First dose:</b> 10mg/kg <b>Second and third:</b> 5mg/kg at 24 hrs interval			
<b>Indomethacin</b>	50mg amp	<b>PDA closure dose</b>			
		<b>Age at 1<sup>st</sup> dose</b>	<b>1st</b>	<b>2nd</b>	<b>3rd</b>
		<48 hr	0.2	0.1	0.1
		2-7 days	0.2	0.2	0.2
		>7 days	0.2	0.25	0.25
<b>Prevention of IVH</b>		0.1 mg/kg every 24 hrs for 3 doses beginning at 6-12 hrs of age			

Drug	Conc.	Neonatal Dose	Pediatric Dose
<b>Milrinone</b> (Primacor®)	10mg/10mL amp.	<p><b>GA &lt; 30 weeks :</b>  <b>loading dose :</b>135 mcg/kg  infused over 3 hrs ,  immediately followed by  <b>Maintenance infusion :</b>  0.2 mcg/kg/min</p> <p><b>GA≥30 weeks:</b>  <b>loading dose:</b> 75 mcg/kg  infused over 1 hrs,  immediately followed by  <b>Maintenance infusion:</b>  0.5-0.75 mcg/kg/min  adjust infusion rate on  bases of hemodynamic and  clinical response.</p>	<p><b>Child 1 month–18 years:</b>  initially 50–75 mcg/kg over  30–60 minutes (reduce or  omit  initial dose if at risk of  hypotension) then 30–  45 mcg/kg/hour by  continuous IV infusion for  2–3 days</p>
<b>IV administration</b>	Dilute with D5W or N.S Maximum conc. per 1 mL is 200 mcg		
<b>Sildenafil</b> (Viagra®)	50 mg/tab	<p><b>Full-term neonates:</b>  0.5-3 mg/kg/dose every 6-  12 hours</p>	<p><b>Infants:</b>  Initial: 0.25 mg/kg/dose  every 6 hours or 0.5  mg/kg/dose every 8 hours;  titrate as needed;  maximum reported dose  range: 1-2 mg/kg/dose  every 6-8 hours</p> <p><b>Children:</b>  <b>8-20 kg:</b> 10 mg three times  daily  <b>&gt;20 kg to 45 kg:</b> 20 mg  three times daily  <b>&gt;45 kg:</b> 40 mg three times  daily</p>

Drug	Conc.	Neonatal Dose	Pediatric Dose
<b>Sodium Nitroprusside</b>	50mg/2mL vial	<p><b>Initial dose:</b> 0.25-0.5 mcg/kg/min continuous IV infusion. Titrate the dose upward every 20 minutes until desired response is attained.</p> <p><b>Usual maintenance dose:</b> Less than 2mcg/kg/min</p> <p><b>For hypertensive crises:</b> May use up to 10 mcg/kg/min, but for no longer than 10 minutes</p>	<p><b>Child 1 month–18 years:</b> 0.5 mcg/kg/min. then increased in steps of 0.2 mcg/kg/min as necessary to max. 8 mcg/kg/min. (max. 4 mcg/kg/minute if used for longer than 24 hours</p>
<b>IV administration</b>	<p><b>DO NOT ADMINISTER DIRECTLY FROM VIAL</b> Dilute to a final conc. Less than or equal 200 mcg/mL with D5W or N.S Use within 24 hr and protect from light with aluminum foil or any other opaque material</p>		

## CNS drugs

Drug	Conc.	Neonatal Dose	Pediatric Dose
<b>Carbamazepine</b> (Tegretol®)	100 mg/ 5ml syp.	5mg/kg/day divided every 6-8 hrs PO. Can be increased weekly to 10mg/kg/day. <b>Maximum dose:</b> 20mg/kg/day	<b>&lt; 6 years:</b> <b>Initial:</b> 10-20mg/kg/day PO every 6 hr, may be increased to a maximum of 35mg/kg/day <b>6-12 years:</b> <b>Initial:</b> 50mg PO every 6 hr, may be increased weekly by 100mg/day <b>Maintenance:</b> 400-800 mg/day PO every 6-8 hr
<b>Diazepam</b> (Neuril®/ Valium®)	10 mg/ 2ml amp	<b>Status epilepticus, febrile convulsions:</b> 0.3-0.4 mg/kg repeated once after 10 minutes if necessary.  By intravenous injection over 3–5 minutes	<b>Status epilepticus, febrile convulsions:</b> <b>Child 1 month–12 years:</b> 0.3-0.4 mg/kg (max. 10 mg) repeated once after 10 minutes if necessary <b>Child 12–18 years:</b> 10 mg repeated once after 10 minutes if necessary
<b>IV administration</b>	1 mL+ 9 mL N.S → 1 mL has 0.5 mg		

Drug	Conc.	Neonatal Dose	Pediatric Dose
<p><b>Midazolam</b> (Dormicum®)</p>	<p>5mg/ml</p>	<p><b>Sedation:</b> <b>IV., IM.:</b> 0.05-0.15 mg/kg/dose over 5 minutes ,repeat as required usually every 2-4 hrs <b>Continuous IV infusion :</b> 0.01-0.06 mg/kg/hr <b>Anticonvulsant:</b> <b>Loading dose:</b> 0.15 mg/kg IV over at least 5 min. Maintenance infusion dose: 0.06-0.4 mg/kg/hr</p>	<p><b>Sedation:</b> <b>IM:</b> 0.1-0.15mg/kg up to 0.5 mg/kg used, not exceed 10 mg <b>IV:</b> <b>&lt;6 months:</b> 0.05mg/kg over 2-3 min., titrate dose with small increments to desired effect. <b>6 months to 5 years:</b> 0.05-0.1 mg/kg, titrate carefully up to 0.6mg/kg, <b>not exceed 6mg total dose.</b> <b>6-12 years:</b> 0.025-0.05 mg/kg, titrate carefully up to 0.4mg/kg may be required, <b>not exceed 10mg total dose.</b> <b>Status epilepticus:</b> <b>loading dose:</b> 0.2-0.5 mg/kg <b>continuous IV infusion:</b> 0.06 -0.12mg/kg/hr, increase rate every 15 min by 0.06-0.12 till seizure ceases.</p>
<p><b>IV administration</b></p>	<p>1 mL+ 9 mL N.S → 1 mL has 0.5 mg Give over at least 5 min. as severe hypotension and seizures have been reported specially in premature infants.</p>		

Drug	Conc.	Neonatal Dose	Pediatric Dose
<p><b>Paracetamol</b> (Perfalgan® vial, Paramol syp)</p>	<p><b>Vial:</b> 1 g/100 mL</p> <p><b>Syrup:</b> 125 mg/5 mL &amp; 250 mg/5 mL</p>	<p><b>I.V.:</b> <b>Loading dose:</b> 20 mg/kg/dose</p> <p><b>Maintenance dose :</b> <b>PMA 28-32 weeks:</b> 10 mg/kg/dose every 12 hours; <i>max daily dose:</i> 22.5 mg/kg/day</p> <p><b>PMA 33-36 weeks:</b> 10 mg/kg/dose every 8 hours; <i>max daily dose:</i> 40 mg/kg/day</p> <p><b>PMA ≥37 weeks:</b> 10 mg/kg/dose every 6 hours; <i>max daily dose:</i> 40 mg/kg/day</p> <p><b>Oral:</b> <b>GA 28-32 weeks:</b> 10-12 mg/kg/dose every 8 hours; maximum daily dose: 40 mg/kg/day</p> <p><b>GA 33-37 weeks &lt;10 days:</b> 10-15 mg/kg/dose every 6 hours; maximum daily dose: 60 mg/kg/day</p> <p><b>Term neonates ≥10 days:</b> 12-15 mg/kg/dose every 6 hours; maximum daily dose: 90 mg/kg/day</p>	<p><b>I.V.:</b> <b>&lt; 2 years:</b> 7.5-15 mg/kg/dose every 6 hours; <i>Maximum daily dose:</i> 60 mg/kg/day</p> <p><b>Children 2-12 years:</b> 15 mg/kg every 6 hours or 12.5 mg/kg every 4 hours; <i>maximum single dose:</i> 15 mg/kg; <i>maximum daily dose:</i> 75 mg/kg/day</p> <p><b>Oral:</b> 10-15 mg/kg/dose every 4-6 hours as needed; do not exceed 6 doses in 24 hours</p>
<p><b>IV administration</b></p>	<p>Give undiluted or dilute to a concentration of 1 mg/mL in D5W or NS. Use within 1 hour of dilution.</p>		



Drug	Conc.	Neonatal Dose	Pediatric Dose
<b>Phenobarbital</b> <b>(Sominalleta®)</b>	<b>Amp:</b> 40 mg /ml  <b>Oral elixir:</b> 15mg/5 ml	<b>Loading dose (optional):</b> <i>I.V.:</i> 16-20 mg/kg in a single dose; maintenance dose 12-24 hours after loading dose <b>Oral:</b> 16 mg/kg divided into 2 doses and administered every 4-6 hours. Maintenance dose 12-24 hours after loading dose <b>Maintenance dose:</b> <b>Oral, I.V.:</b> <i>Initial:</i> 5-8 mg/kg/day divided every 12hours. After patient is stabilized, decrease Phenobarbital dose by 20% every other day.	<b>Loading dose:</b> <b>I.V Initial:</b> 15-20 mg/kg (maximum: 1000 mg/dose); may repeat dose after 15 minutes as needed (maximum total dose: 40 mg/kg) <b>Maintenance dose:</b> usually starts 12 hours after loading dose <b>Infants:</b> 5-6 mg/kg/day in 1-2 divided doses <b>1-5 years:</b> 6-8 mg/kg/day in 1-2 divided doses <b>5-12 years:</b> 4-6 mg/kg/day in 1-2 divided dose.
<b>IV administration</b>	1 mL+ 3 mL NS ➡ 1 mL has 10 mg		
<b>Phenytoin</b> <b>(Ipanutin®)</b>	<b>Amp.:</b> 250mg/ 5ml  <b>Oral susp.:</b> 30mg/ 5ml	<b>Loading dose:</b> <i>I.V., oral:</i> 15-20 mg/kg in a single or divided dose; then begin maintenance therapy usually 12 hours after dose. <b>Maintenance dose:</b> <b>I.V., Oral:</b> Initial: 5-8 mg/kg/day in 2 divided doses	
<b>IV administration</b>	1 mL+ 9 mL NS ➡ 1 mL has 5 mg Give over at least 30 min to avoid extravasation, bradycardia, arrhythmias and hypotension. <b>DO NOT USE CENTRAL LINE</b> <b>DO NOT REFRIGERATE TO AVOID PRECIPITATION</b>		

Drug	Conc.	Neonatal Dose	Pediatric Dose
<p><b>Valproate Sodium (Depakine®)</b></p>	<p><b>Drops:</b> 200 mg/ml</p> <p><b>Syrup:</b> 250mg/5 ml</p>	<p>Valproic acid and derivatives-are associated with hepatotoxicity, so not preferred agents for use in neonates.</p>	<p><b>Initial dose:</b> 10-15 mg/kg/day in 1-3 divided doses; increase by 5-10 mg/kg/day at weekly intervals until seizures are controlled or side effects preclude. If doses &gt;250 mg/day give in divided doses</p> <p><b>Maintenance dose:</b> 30-60 mg/kg/day in 2-3 divided doses can be given twice daily</p> <p><b>Note:</b> Children receiving more than 1 anticonvulsant (polytherapy) may require doses up to 100 mg/kg/day in 3-4 divided doses.</p>

## GIT drugs

Drug	Conc.	Neonatal Dose	Pediatric Dose
<b>Domperidone</b> (Motillium®)	1mg/ml Susp	<b>Gastro-oesophageal reflux disease, gastro-intestinal stasis(Off label use)</b> <b>By mouth</b> 0.1-0.3 mg/kg 4–6 times daily before feeds	<b>For nausea and vomiting:</b> <b>Child over 1 month and body-weight up to 35 kg</b> 0.25-0.5 mg/kg 3–4 times daily Max. 2.4 mg/kg in 24 hours <b>Body-weight 35 kg and over</b> 10–20 mg 3–4 times daily Max. 80 mg daily <b>Gastro-oesophageal reflux disease, gastro-intestinal stasis:</b> <b>Child 1 month–12 years</b> 0.2-0.4 mg/kg (max. 20 mg) 3–4 times daily before food <b>Child 12–18 years</b> 10–20 mg, 3–4 times daily before food
<b>Metoclopramide</b> (Primperan®)	<b>Syrup:</b> 5 mg/ 5 ml <b>Amp:</b> 10 mg/ 2 mL <b>Supp:</b> 10 mg <b>Drops:</b> 2.5 mg/ 1 mL (0.15 mg/drop)	0.033-0.1 mg/kg/dose orally or slow IV push every 8 hrs	<b>Child 1 month–1 year and body-weight up to 10 kg:</b> 0.1 mg/kg twice daily(max. 1 mg) <b>Child 1–3 years and body-weight 10–14 kg:</b> 1 mg 2–3 times daily <b>Child 3–5 years and body-weight 15–19 kg:</b> 2 mg 2–3 times daily <b>Child 5–9 years and body-weight 20–29 kg:</b> 2.5 mg 3 times daily <b>Child 9–18 years and body-weight 30–60 kg:</b> 5 mg 3 times daily <b>Child 15–18 years and body-weight over 60 kg:</b> 10 mg 3 times daily

Drug	Conc.	Neonatal Dose	Pediatric Dose
<b>Omperazole</b> (Losec <sup>®</sup> , Risek <sup>®</sup> )	40 mg vial	0.5-1.5 mg/kg/dose once daily. Some neonates may require up to 2.8 mg/kg once daily	<b>Child 1 month–12 years:</b> Initially 0.5 mg/kg (max.20 mg) once daily, increased to 2 mg/kg (max. 40 mg) once daily if necessary <b>Child 12–18 years:</b> 40 mg once daily
<b>IV administration</b>	40 mg+ 10 mL NS → 1 mL has 4 mg <b>Therefore</b> if the dose is 2 mg/kg/day, use ½ mL/kg/dose then complete the total volume to 10 mL with NS and give over 30 min.		
<b>Ondansetron</b> (Zofran <sup>®</sup> , Danset <sup>®</sup> )	2mg/ml amp	Safety and efficacy not established in infants < 6 month	<b>Children 6 month-12 years &lt;40 kg:</b> 0.1-0.15mg/kg/dose every 6-8 hrs <b>Children &gt;40 kg:</b> 4 mg/dose every 6-8 hrs
<b>Ranitidine</b> (zantac <sup>®</sup> )	50 mg /2ml amp	<b>Term:</b> 1.5 mg/kg/dose every 8 hours <b>Preterm:</b> 0.5 mg/kg/dose every 12 hours	<b>Child 1 month–18 years</b> 1 mg/kg (max. 50 mg) every 6–8 hours
<b>IV administration</b>	1 mL+9 mL → 1 mL has 2.5 mg The diluted soln may be given orally. The diluted soln is stable for 48 hr. at room temp.		
<b>Simethicone</b>	<b>Drops:</b> 20 mg/1mL <b>Emulsion:</b> 100 mg/5 mL	2.5mL with or after each feed (max. 6 doses in 24 hours); may be added to bottle feed	

## Respiratory drugs

Drug	Conc.	Neonatal Dose	Pediatric Dose
<b>Albuterol Salbutamol (Farcolin®)</b>	0.5 mg/mL	<b>Nebulization:</b> 1.25-2.5mg/dose Diluted to 2-4 ml with normal saline	<b>Nebulization:</b> 0.15mg/kg every 20 minutes for 3 doses then 0.3mg/kg (not exceed 10mg) every 1-4 hrs
<b>Aminophylline</b>	125 mg/5ml 250 mg/5ml Amp.	<b>Loading Dose:</b> 8 mg/kg IV infusion over 30 min.	
		<b>Maintenance Dose:</b> 1.5-3mg/kg/dose every 8-12 hrs (to be given 8-12 hr after LD)	
		<b>Neonatal apnoea:</b> Initially 6 mg/kg, then 2.5 mg/kg every 12 hours (increased if necessary to 3.5 mg/kg every 12 hours)	
<b>IV administration</b>	1 mL of the 125 mg/5 mL amp+ 4 mL N.S → 1 mL has 5 mg		
<b>Budesonide (Pulmicort®)</b>	0.5 mg/2 ml	0.25 mg twice daily or 0.5 mg once daily; Maximum dose: 1 mg/day	
<b>Caffeine citrate (caffienosprine®)</b>	20 mg/ml	<b>Loading Dose:</b> 20-25 mg/kg IV over 30 min.	
		<b>Maintenance Dose:</b> 5-10mg/kg/day ,24 hrs after LD	
<b>IV administration</b>	1 mL+ 4 mL N.S → 1 mL has 5 mg		
<b>Dexamethazone (Decadron®)</b>	8mg/2ml	0.25-0.5 mg/kg/dose every12 hr	
<b>IV administration</b>	1 mL+ 3 mL N.S → 1 mL has 1 mg		

Drug	Conc.	Neonatal Dose	Pediatric Dose
<b>Hydrocortisone</b> (Solu-cortef®)	100mg/2ml	<b>Loading Dose:</b> 4 to 8 mg/kg; maximum: 25 mg  <b>Maintenance Dose:</b> 1- 2 mg/kg/dose every 6 hours.	
<b>IV administration</b>	1 mL+9 mL N.S → 1 mL has 5 mg		
<b>Ipratropium</b> (Atrovent®)	500mcg/2ml	<b>Nebulization:</b> 75- 175 mcg 3-4 times/day	<b>Infants:</b> <b>Nebulization:</b> 125-250 mcg 3 times/day  <b>Children:</b> <b>Nebulization:</b> 250-500 mcg (0.25-0.5 mg) every 20 minutes for 3 doses, then as needed.
<b>Survanta</b>		4 mL/kg/dose intratracheally divided into 4 aliquotes  <b>Prophylaxis:</b> First dose is given as soon as possible after birth, with up to three additional doses in the first 48 hours of life if indicated.  <b>Rescue treatment of RDS:</b> Up to 4 doses in first 48 hours, no more frequently than every 6 hours	

## Miscellaneous drugs

Drug	Conc.	Neonatal Dose	Pediatric Dose
<b>Albumin20%</b>	10g/50ml	0.5-1 g/kg/day Maximum dose: 6 mg/kg/day	
<b>IV administration</b>	Each mL has 200 mg therefore the dose is <b>2.5-5 mL/kg/day</b> May be given undiluted or diluted with D5W		
<b>Aminoven</b>	10 g/ 100 mL	Start with 0.5 g/kg/day and titrate up to 2.5 g/kg/day	
<b>IV administration</b>	Each mL has 100 mg therefore the dose is <b>5-25 mL/kg/day</b>		
<b>Glucagon</b>	1mg/vial 1g/vial	200 mcg/kg/dose IV push, IM, SC. <i>Maximum dose: 1 mg</i> <i>Continuous infusion:</i> Begin with 10-20 mcg/kg/hr (0.5-1mg/day) Rise in blood glucose should occur within 1 hr of starting infusion	
<b>Insulin regular</b>	100 I.U/ 1mL	<b>Hyperglycemia:</b> <i>Continuous IV infusion:</i> 0.01-0.1 unit/kg/hr <i>Intermittent dose:</i> 0.1-0.2 unit/kg every 6-12 hours SC <b>Hyperkalemia:</b> <i>Initial:</i> 0.1-0.2 units/kg/hr in combination with 0.5 g/kg/hr dextrose, given as continuous IV infusion Adjust insulin and dextrose dosages based on serum glucose and potassium concentrations.	
<b>IV Immune Globulin</b>	2500mg/ 50mL	<b>Iso-immune hemolytic disease:</b> <b>I.V.:</b> <b>GA ≥35 weeks:</b> 500-1000 mg/kg/dose once over 2 hrs; if needed, dose may be repeated in 12 hrs; most effective when administered as soon as possible after diagnosis	
<b>IV administration</b>	Each mL has 50 mg therefore the dose is <b>10-20 mL/kg/dose</b>		



Drug	Conc.	Neonatal Dose	Pediatric Dose
<b>Silymarin</b> <b>(Hepaticum®)</b>	50mg/ 5ml syp	5-10 mg/kg body weight daily in 2-3 divided doses. (1ml/kg/day)	
<b>Ursodeoxycolic acid</b> <b>(Ursogall®)</b>	158mg/ 5ml	<b>Gallstone , Biliary atresia:</b> 10-15mg/kg/day <b>Cystic fibrosis</b> 30 mg/kg/day in 3 divided doses	

## Minerals and Vitamins

Drug	Conc.	Neonatal Dose	Pediatric Dose
<b>Calcium</b>	<p style="text-align: center;"><b>Amp.:</b> Ca. gluconate 10% 1000 mg/10 ml equivalent to 93 mg elemental calcium</p> <p style="text-align: center;"><b>Syrup:</b> Ca. Glubionate <b>Hical</b><sup>®</sup>: 1.2 g/5mL eq. to 78 mg elemental Ca. <b>Hical Forte</b><sup>®</sup>: 1.8 g/5mL eq. to 115 mg elemental Ca</p>	<p><b>Calcium Supplementation:</b></p> <p><b>0-6 months old:</b> 210 mg/day PO divided q8-12hr, preferably 1-2 hrs after meals</p> <p><b>7-12 months old:</b> 270 mg/day PO divided q8-12hr, preferably 1-2 hrs after meals</p> <p><b>1-3 years old:</b> 500 mg/day PO divided q8-12hr, preferably 1-2 hrs after meals</p> <p><b>4-8 years old:</b> 800 mg/day PO divided q8-12hr, preferably 1-2 hrs after meals</p> <p><b>9-18 years old:</b> 1.3 g/day PO divided q8-12hr, preferably 1-2 hrs after meals</p>	
		<p><b>Hypocalcemic tetany:</b> 100-200 mg/kg IV over 10 minutes (1-2 mL/kg); may be repeated after 6 hrs, or initiate continuous infusion not to exceed 500 mg/kg/day</p>	
		<p><b>Severe hypocalcemia:</b></p> <p><b>IV:</b> 200-800 mg/kg/day (2-8 mL/kg/day) IV as continuous infusion or in 4 divided doses.</p> <p><b>Oral:</b> 20-80 mg/kg/day elemental Ca in divided doses</p>	<p><b>Severe hypocalcemia:</b></p> <p><b>IV:</b> 200-500 mg/kg/day (2-5 mL/kg/day) as a continuous infusion or in 4 divided doses.</p>
<b>IV administration</b>	Dilute with equal volume of D5W and give by IV infusion over 10-30 minutes while monitoring for bradycardia. Stop infusion if HR < 100 bpm		

Drug	Conc.	Neonatal Dose	Pediatric Dose
<b>Folic acid</b>	400 mcg/tab 500 mcg/tab 800 mcg/tab	<b>Oral:</b> <b>Premature neonates:</b> 25-50 mcg/kg/day <b>Full-term neonates:</b> 65 mcg/kg/day	<b>Treatment of Anemia due to folic acid deficiency:</b> <b>Oral:</b> <b>Infants:</b> 0.1 mg/day <b>Children &lt;4 years:</b> Up to 0.3 mg/day <b>Children &gt;4 years and Adolescents:</b> 0.4 mg/day
<b>Iron</b>	<b>Hydroferrin® drops:</b> 50mg/1ml (1.67 mg elemental iron/1 drop)  <b>K G rone® syp:</b> Ferrous SO4 75mg/5ml (15mg elemental iron/5ml )  <b>Haemojet® syp:</b> 50 mg/5ml elemental iron	<b>Premature neonates:</b> <b>Treatment and prevention of iron deficiency:</b> 2-4 mg elemental iron/kg/day divided every 12-24 hours (maximum dose: 15 mg/day) .  <b>Term neonates:</b> <b>Treatment, severe iron deficiency anemia:</b> 4-6 mg elemental iron/kg/day in 3 divided doses <b>Treatment, mild to moderate iron deficiency anemia:</b> 3 mg elemental iron/kg/day in 1-2 divided doses <b>Prophylaxis, iron deficiency anemia:</b> 1-2 mg elemental iron/kg/day (maximum dose: 15 mg /day).	<b>Treatment, severe iron deficiency anemia:</b> 4-6 mg elemental iron/kg/day in 3 divided doses  <b>Treatment, mild to moderate iron deficiency anemia:</b> 3 mg elemental iron/kg/day in 1-2 divided doses  <b>Prophylaxis, iron deficiency anemia:</b> 1-2 mg elemental iron/kg/day (maximum dose: 15 mg elemental iron/day).

Drug	Conc.	Neonatal Dose	Pediatric Dose
<b>L-carnitine</b>	300 mg/ml	<b>Oral:</b> <b>Initial:</b> 50 mg/kg/day in divided doses every 3-4 hours; titrate slowly as needed to 50-100 mg/kg/day in divided doses	<b>Oral:</b> <b>Initial:</b> 50 mg/kg/day in divided doses; may titrate slowly as needed to 100 mg/kg/day in divided doses; <b>Maximum daily dose:</b> 3000 mg/day
<b>Magnesium Sulphate 10%</b>	2.5 g/25ml 1 g of magnesium sulfate = 98.6 mg elemental magnesium	<b>Hypomagnesaemia:</b> <b>IV:</b> 0.2-0.4mEq/kg/ dose every 8-12 hours, for 2-3 doses (equal to 25-50 mg /kg/dose) infuse over 30- 60 minutes.  <b>Daily maintenance Mg:</b> <b>IV:</b> 0.25-0.5 mEq/kg/day added to parentral fluids  <b>Persistent pulmonary hypertension:</b> <b>Loading dose:</b> 200 mg/kg was infused over 30 minutes <b>Maintenance dose:</b> 20 to 50 mg/kg/h  <b>Resuscitation (Pulseless Torsades)</b> 25-50 mg/kg IV/intraosseous rapid infusion.	<b>Hypomagnesaemia:</b> <b>I.M., I.V.:</b> 25-50 mg/kg/dose (equal to 0.2-0.4 mEq/kg/dose) every 4-6 hrs for 3-4 doses; maximum single dose: 2 g(equal to 16 mEq) <b>Daily maintenance Mg:</b> <b>≤45 kg:</b> 0.25-0.5 mEq/kg/day <b>Management of seizure and hypertension:</b> <b>I.M., I.V.:</b> 20-100 mg/kg/dose every 4-6 hrs as needed; in severe cases, doses as high as 200 mg/kg/dose have been used
<b>IV administration</b>	Each mL has 100 mg Must be diluted prior to IV administration.		

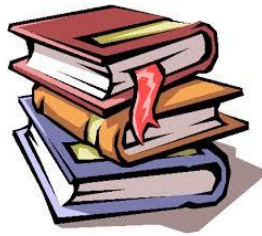
Drug	Conc.	Neonatal Dose	Pediatric Dose
<b>Potassium Chloride</b>	<b>Amp:</b> 10mEq/5ml  Potassium-m <b>Syrup:</b> 165mg/5ml  1mEq = 75 mg	<p><b>Prevention of hypokalemia during diuretic therapy:</b>            1-2 mEq/kg/day in 1-2 divided doses.</p> <p><b>Treatment of hypokalemia:</b>  <b>Oral:</b> 2-5 mEq/kg/day in divided doses; not to exceed 1-2 mEq/kg as a single dose; if deficits are severe or ongoing losses are great, I.V. route is the preferred route of administration</p> <p><b>Intermittent I.V. infusion:</b>            0.5-1 mEq/kg/dose, infuse at 0.3-0.5 mEq/kg/hour (maximum dose/rate: 1 mEq/kg/hour); then repeat as needed based on frequently obtained lab values;            severe depletion or ongoing losses may require &gt;200% of normal daily limit needs</p>	
<b>IV administration</b>	Each mL has 2 meq Must be diluted prior to administration		
<b>Sodium Bicarbonate</b>	2.1 g/25ml 8.4 % (1 mEq/mL)	<p><b>Metabolic acidosis:</b>  <math>\text{HCO}_3^- (\text{mEq}) = 0.3 \times \text{weight (kg)} \times \text{base deficit (mEq/L)}</math>            Administer half the calculated dose then asses the need for the reminder</p> <p><b>Usual dosage:</b>            1-2 mEq/kg/dose (1-2 ml/kg/does) over at least 30 minutes</p> <p><b>Cardiac arrest :</b>            1-2 mEq/kg IV slow push over 2 minutes may be repeated after 10 minutes</p>	2-5 mEq/kg I.V. infusion over 4-8 hours; subsequent doses should be based on patient's acid-base status
<b>IV administration</b>	Dilute with equal volume of NS or D5W May be given orally		

Drug	Conc.	Neonatal Dose	Pediatric Dose
<b>Vitamin D</b> <b>(Vidrop®)</b>	2800 IU/mL 100 IU/drop	<b>Nutritional Supplementation:</b> <b>RDA</b> 0-12 months: 400 IU (10 mcg) PO once daily 1-18 years: 600 IU (15 mcg) PO once daily <b>Vitamin D-Resistant Rickets</b> 12,000-500,000 IU (0.3-12.5 mg) PO once <b>Or</b> 5000-10,000 IU is given daily for 2-3 months <b>Familial Hypophosphatemia</b> 40,000-80,000 IU (1-2 mg) PO once daily with phosphate supplements; may be reduced after stage of growth is complete	
<b>Decal B12</b>	Each 5 ml contain: Ca Laevulinate 50 mg Vit. D3 1000 I.U Vit. B12 10mcg	<b>Infants:</b> 1\4 - 1\2 teaspoonful. <b>Children:</b> 1\2 – 1 teaspoonful.	
<b>Vitamin k</b> <b>(Amri-k)</b>	10mg/ml amp.	<b>Prophylaxis from hemorrhagic disease of newborn:</b> <b>I.M:</b> Administer within 1 hr of birth <b>preterm infants GA &lt;32 weeks:</b> Birth weight <1000 g: 0.3mg/kg once Birth weight ≥1000 g: 0.5mg once <b>Term neonate:</b> 0.5-1 mg once <b>Treatment:</b> <b>SC,I.M:</b> 1-2 mg/day up to10 mg in severe hemorrhagic disease	<b>S.C, I.M:</b> 1-2 mg/dose as a single dose

## Abbreviations

Abb.	Term	Definition
<b>APTT</b>	Activated Partial Thromboplastin Time	It is a performance indicator of the efficacy of both the "intrinsic" and the common coagulation pathways
<b>GA</b>	Gestational Age	Time elapsed between the first day of the last menstrual period and the day of delivery. It is expressed as completed weeks
<b>IO</b>	Intraosseous	Injecting directly into the marrow of a bone to provide a non collapsible entry point into the systemic venous system
<b>IV</b>	Intravenous	Injecting directly into a vein
<b>IVH</b>	Intraventricular Hemorrhage	Bleeding into the brain's ventricular system
<b>PDA</b>	Patent Ductus Arteriosus	Congenital disorder in the heart, where the neonate's ductus arteriosus fails to close after birth.
<b>PMA</b>	Postmenstrual Age	GA+ PNA
<b>PNA</b>	Postnatal Age	Time elapsed after birth
<b>PO</b>	Peroral	Administered through the mouth
<b>RDA</b>	Recommended Dietary Allowance	The daily intake level of a nutrient that is considered to be sufficient to meet the requirements of 97-98% of healthy individuals
<b>RDS</b>	Respiratory Distress Syndrome	A syndrome caused by developmental insufficiency of surfactant production and structural immaturity in the lungs
<b>SC</b>	Subcutaneous	Administered in the subcutis, the layer of the skin directly below the dermis and epidermis





## **References:**

Neofax 2011

BNF for children 2011-2012

Neonatal Care Protocol for Hospital Physicians March 2010