

Drug	Loading Dose	Reconstitution	Route and Administration	Comments / major side effects
Acetylsteine	Neonates and children 1 month to 18 years (body weight under 20Kg) - 150mg/Kg	Dilute in 3mL/Kg Glucose 5%	Intravenous infusion over 1 hour.	Loading dose to be followed by 50mg/Kg in 7mL/Kg Glucose 5% and given over 4 hours, then 100mg/Kg in 14mL/Kg Glucose 5% and given over 16 hours. If Glucose inappropriate diluent Sodium Chloride 0.9% can be substituted. Hypersensitivity-like reactions: reduce infusion rate or suspend infusion until reaction resolved, treat symptomatically
	Children 1 to 18 years (body weight 20Kg to 40kg) - 150mg/Kg	Dilute in 100ml Glucose 5%	Intravenous infusion over 1 hour.	Loading dose to be followed by 50mg/Kg in 250ml Glucose 5% and given over 4 hours, then 100mg/Kg in 500ml Glucose 5% and given over 16 hours. If Glucose inappropriate diluent Sodium Chloride 0.9% can be substituted. Hypersensitivity-like reactions: reduce infusion rate or suspend infusion until reaction resolved, treat symptomatically
	Children 1 month to 18 years (body weight over 40kg - 150mg/Kg (maximum 16.6g)	Dilute in 200ml Glucose 5%	Intravenous infusion over 1 hour.	Loading dose to be followed by 50mg/Kg (maximum 5.6g) in 500ml Glucose 5% and given over 4 hours, then 100mg/Kg (maximum 11g) in 1 litre Glucose 5% and given over 16 hours. If Glucose inappropriate diluent Sodium Chloride 0.9% can be substituted. Hypersensitivity-like reactions: reduce infusion rate or suspend infusion until reaction resolved, treat symptomatically

[See adult BNF \(http://www.medicinescomplete.com/mc/bnf/current/PHP188-analgesics-non-opioid.htm\)](http://www.medicinescomplete.com/mc/bnf/current/PHP188-analgesics-non-opioid.htm)

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Aminophylline (for severe acute asthma)	Children 1 month to 18 years - not previously treated with theophylline 5mg/Kg (maximum 500mg) - for severe acute asthma	By intravenous injection over at least 20 minutes	Dilute to a concentration of 1mg in 1ml (i.e. 500mg in 500ml) with Glucose 5% or Sodium Chloride 0.9%	Use ideal weight for height to calculate dose in obese children to avoid excessive dose. Omit loading dose if currently taking oral theophylline. Follow loading dose with continuous infusion: child 1 month to 12 years 1mg/Kg/hr; child 12 to 18 years 500-700 microgram/Kg/hr, adjusting rate according to plasma levels
Amiodarone (for supraventricular and ventricular arrhythmias)	ORAL Neonates - 5 to 10mg/kg TWICE DAILY for 7 to 10 days Children 1 month to 12 years - 5 to 10mg/kg (maximum 200mg) TWICE DAILY for 7 to 10 days Children 12 to 18 years - 200mg THREE TIMES DAILY for 7 days, then 200mg TWICE DAILY for 7 days	Tablets may be crushed and dispersed in water		Following loading doses the usual oral maintenance doses are: Neonates - 5 to 10mg/kg ONCE DAILY. Children 1 month to 12 years - 5 to 10mg/Kg (maximum 200mg) ONCE DAILY. Children 12 to 18 years - 200mg ONCE DAILY adjusted according to response. Injection solution must not be given orally as it is irritant.
	INTRAVENOUS Neonates - 5mg/Kg Children 1 month to 18 years - 5 to 10mg/Kg	Dilute to a concentration of not less than 600 micrograms/mL with Glucose 5%. Incompatible with Sodium Chloride infusion.	Intravenous infusion: Neonates over 30 minutes Children 1 month to 18 years over 20 minutes to 2 hours	Following loading doses the usual intravenous maintenance doses are: Neonates - 5mg/kg over 30 minutes every 12 to 24 hours. Children 1 month to 18 years - 300 micrograms/Kg/hour by continuous intravenous infusion, increased according to response to a maximum of 1.5mg/Kg/hour not exceeding 1.2g in 24 hours. If repeated doses or continuous infusion are required administration via a central venous catheter is recommended as infusion via a peripheral vein may cause pain and inflammation. Avoid equipment containing the plasticizer di-2-ethyl-hexphthalate (DEHP). Incompatible with Sodium Chloride infusion.

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<p>Caffeine (Base) IV / PO (for neonatal apnoea)</p>	<p>10mg/kg.</p>	<p>I.V. If volume is less than 1 ml, dilute to 1 ml.</p>	<p>For intravenous load give by infusion over 30 minutes. Injection can be given orally</p>	<p>Prescribe as Caffeine(base). Caffeine base 1mg is equivalent to Caffeine Citrate 2mg. Follow loading dose after 24 hours with daily maintenance dose of 2.5 to 5 mg/kg . TDM not routinely needed, range 10-35 mg/l. Request level if standard treatment appears ineffective or toxicity suspected. Injection can be given orally.</p>																											
<p>Digoxin</p>	<table border="1"> <thead> <tr> <th colspan="3" data-bbox="495 531 880 632">Total loading dose (microgram/Kg/24 hours) in divided dose schedule</th> </tr> <tr> <th data-bbox="495 632 712 667">Age</th> <th data-bbox="712 632 801 667"><i>Oral</i></th> <th data-bbox="801 632 880 667">IV</th> </tr> </thead> <tbody> <tr> <td data-bbox="495 667 712 735">Neonate under 1.5Kg</td> <td data-bbox="712 667 801 735">25</td> <td data-bbox="801 667 880 735">20</td> </tr> <tr> <td data-bbox="495 735 712 804">Neonate 1.5 to 2.5Kg</td> <td data-bbox="712 735 801 804">30</td> <td data-bbox="801 735 880 804">30</td> </tr> <tr> <td data-bbox="495 804 712 873">Neonate to 2 years</td> <td data-bbox="712 804 801 873">45</td> <td data-bbox="801 804 880 873">35</td> </tr> <tr> <td data-bbox="495 873 712 941">2 to 5 years</td> <td data-bbox="712 873 801 941">35</td> <td data-bbox="801 873 880 941">35</td> </tr> <tr> <td data-bbox="495 941 712 1010">5 to 10 years</td> <td data-bbox="712 941 801 1010">25</td> <td data-bbox="801 941 880 1010">25</td> </tr> <tr> <td colspan="3" data-bbox="495 1010 880 1038">Maximum po 750mcg/ 24hours iv 500mcg / 24</td> </tr> <tr> <td data-bbox="495 1038 712 1246">Over 10 years</td> <td colspan="2" data-bbox="712 1038 880 1246">oral: 750 micrograms to 1.5mg iv: 500 micrograms to 1 mg</td> </tr> </tbody> </table>	Total loading dose (microgram/Kg/24 hours) in divided dose schedule			Age	<i>Oral</i>	IV	Neonate under 1.5Kg	25	20	Neonate 1.5 to 2.5Kg	30	30	Neonate to 2 years	45	35	2 to 5 years	35	35	5 to 10 years	25	25	Maximum po 750mcg/ 24hours iv 500mcg / 24			Over 10 years	oral: 750 micrograms to 1.5mg iv: 500 micrograms to 1 mg		<p>For intravenous infusion dilute with sodium chloride 0.9% or Glucose 5% to a max. concentration of 62.5 microgram/ml. Protect from light.</p>	<p>Loading doses by intravenous infusion over 30 to 60 minutes. Maintenance doses by intravenous infusion over 10 to 20 minutes</p>	<p>Divided dose schedule for loading doses: give 50% of total loading dose immediately, then 25% at 6 hours and 12 hours assessing clinical response before giving dose. Start maintenance dose 12 hours after end of full loading dose: neonates up to 2.5Kg - 4 to 6 microgram/Kg/day; neonates over 2.5Kg - 10 microgram/Kg/day; children 1 month to 5 years - 10 microgram/Kg/day; children 5 to 10 years - 6 microgram/Kg/day(max 250 micrograms/day); children over 10 years - 62.5 to 250 microgram per day. Maintenance doses to be given as 1 or 2 divided doses. Reduce dose in renal impairment.. Toxicity increased by electrolyte disturbances. Oral is preferred route. Oral solution must not be diluted. Vomiting, arrhythmias and bradycardia can occur.</p>
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<p>Heparin</p>	<p>All ages - 75 units/Kg but reduce dose to 50 units/Kg if under 35 weeks postmenstrual age.</p>	<p>Dilute 1250units per Kg body weight to 50mL with Sodium Chloride 0.9% or Glucose 5% to provide a concentration of 25units/Kg /mL. Avoid preparations containing benzyl alcohol in neonates.</p>	<p>Loading dose by slow intravenous injection over 20 minutes via a syringe pump.</p>	<p>Follow loading dose with continuous infusion via syringe pump: neonates and children under 1 year - 25 units/Kg/hr, children over 1 year - 20 units/Kg per hour adjusted according to APPT ratio (target 2 - 2.5). Check APTT 4 hours after initiation of treatment and 4 hours after any change in rate/dose; if no changes made check every 24 hours together with platelet count.</p>														
				<table border="1"> <thead> <tr> <th data-bbox="1503 536 1720 571"><i>APTT ratio</i></th> <th data-bbox="1720 536 2069 571"><i>Dose/rate change</i></th> </tr> </thead> <tbody> <tr> <td data-bbox="1503 571 1720 603"><1.7</td> <td data-bbox="1720 571 2069 603">increase by 10% (note 1)</td> </tr> <tr> <td data-bbox="1503 603 1720 635">1.7 - 1.9</td> <td data-bbox="1720 603 2069 635">increase by 10%</td> </tr> <tr> <td data-bbox="1503 635 1720 667">2 - 2.7</td> <td data-bbox="1720 635 2069 667">no change</td> </tr> <tr> <td data-bbox="1503 667 1720 699">2.8 - 3.2</td> <td data-bbox="1720 667 2069 699">reduce by 10%</td> </tr> <tr> <td data-bbox="1503 699 1720 730">3.3 - 4</td> <td data-bbox="1720 699 2069 730">reduce by 10% (note 2)</td> </tr> <tr> <td data-bbox="1503 730 1720 762">>4</td> <td data-bbox="1720 730 2069 762">reduce by 15% (note 3)</td> </tr> </tbody> </table>	<i>APTT ratio</i>	<i>Dose/rate change</i>	<1.7	increase by 10% (note 1)	1.7 - 1.9	increase by 10%	2 - 2.7	no change	2.8 - 3.2	reduce by 10%	3.3 - 4	reduce by 10% (note 2)	>4	reduce by 15% (note 3)
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<p>Notes:</p>																		
<p>(1) Give IV bolus 50 units/Kg before recommencing at increased rate</p>																		
<p>(2) Stop infusion for 30 minutes before recommencing at reduced rate</p>																		
<p>(3) Stop infusion for 60 minutes before recommencing at reduced rate</p>																		
<p>Phenobarbital (Phenobarbitone) (for status epilepticus)</p>	<p>All ages - 20 mg/kg (Maximum of 1g for children 12 to 18 years)</p>	<p>Dilute to a concentration of 20mg/ml with water for injection</p>	<p>Slow IV injection via syringe pump over half an hour. Maximum rate 1mg/Kg/min.</p>	<p>Follow loading dose 24 hours later with oral or IV maintenance dose of 2.5 to 5mg/Kg/day in 1 or 2 divided doses. Children 12 to 18 years: 300mg TWICE DAILY.</p>														
<p>Phenytoin sodium</p>	<p>All ages - 18mg/kg. Give over 20 minutes. If greater than 55Kg give at 50 mg/minute</p>	<p>Use undiluted or dilute to a concentration not exceeding 10mg/ml with Sodium Chloride 0.9%. Complete infusion within 1 hour of dilution.</p>	<p>Slow IV injection into a large vein or infusion via syringe pump and in-line filter (0.22 to 5 micron) at a rate not exceeding 1mg/Kg/minute (maximum 50mg/minute)</p>	<p>IV maintenance dose of 2.5 to 5mg/Kg twice a day. Children 12 to 18 years: up to 100mg three to four times a day.</p>														

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Salbutamol (for severe acute or life-threatening acute asthma)	Child 1 month to 2 years - 5 microgram/Kg as a single dose. Child 2 to 18 years - 15 micrograms/Kg (to a maximum of 250 micrograms) as a single dose.	Dilute to a concentration of 50 micrograms/mL with Glucose 5%, Sodium Chloride 0.9% or Water for Injections	Intravenous injection over 5 minutes.	Monitor serum potassium concentration. Use with caution in diabetes - monitor blood glucose and for ketoacidosis. Use with caution in hypothyroidism, cardiovascular disease, arrhythmias, susceptibility to prolongation of QT interval and hypertension.
Teicoplanin	Neonates - 16 mg/kg	Add the ampoule of water (3.2ml) slowly to 200mg vial. Roll vial gently to dissolve without foaming. Add further 2ml of Sodium Chloride 0.9% to vial (removing some air). Final solution contains 40 mg/ml.	Intravenous infusion over 30 minutes	Follow loading dose 24 hours later with daily maintenance dose of 8mg/Kg. Reduce frequency to once every two days in renal failure.
	Child 1 month to 18 years - 10mg/kg (maximum 400mg) every 12 hours for 3 doses	Slowly add the diluent provided to the vial of teicoplanin. Roll vial gently to dissolve without foaming. This will provide a concentration of 200mg/3ml for the 200mg vial and 400mg/3ml for the 400mg vial. Further dilute in Glucose 5% of Sodium Chloride 0.9% if giving by infusion	Intravenous injection or by intravenous infusion over 30 minutes	Follow final loading dose 24 hours later with daily maintenance dose of 6mg/Kg (maximum 400mg) or 10mg/Kg (maximum 400mg) for severe infections (including neutropenic sepsis). Reduce maintenance dose in renal impairment.