



# KIDS Clinical Guideline - Drug dose calculator

All drugs to be given by intravenous route unless otherwise stated. It is the responsibility of the clinician to ensure drugs are used appropriately according to the clinical situation and doses double checked. KIDS/NTS does not accept any liability.

Date  **Weight (kg):**  **Name:**

Weight checked by: Name..... Signed..... Prescriber : Name..... Signed.....

| <b>Single drug doses:</b>                       |                      |
|---|----------------------|
| <b>Induction agents for intubation</b>          |                      |
| <b>Ketamine (2 mg/kg)</b>                       | Dose<br>11mg         |
| <b>Thiopentone (2-4 mg/kg)</b>                  | 11 - 22mg            |
| <b>Fentanyl (1-5 micrograms/kg)</b>             | 5.5 - 27.5micrograms |
| <b>Propofol (2-5 mg/kg)</b>                     | 11 - 27.5mg          |
| <b>Muscle relaxants for intubation</b>          |                      |
| <b>Suxamethonium (Weight &lt;10kg: 2mg/kg)</b>  | 11mg                 |
| <b>Suxamethonium (Weight &gt;=10kg: 1mg/kg)</b> | -                    |
| <b>Rocuronium (1mg/kg)</b>                      | 5.5mg                |
| <b>Vecuronium (0.1mg/kg)</b>                    | 0.55 mg              |
| <b>Emergency drugs for cardiac arrest</b>       |                      |
| <b>Adrenaline 1:10,000 (0.1ml/kg)</b>           | 0.55ml               |
| <b>Atropine (20micrograms/kg)</b>               | 110micrograms        |
| <b>Adenosine (0.1 - 0.5 mg/kg)</b>              | 0.55 - 2.75mg        |
| <b>Amiodarone (5mg/kg)</b>                      | 27.5mg               |
| <b>Calcium gluconate 10% (0.5ml/kg)</b>         | 2.75ml               |
| <b>Sodium Bicarbonate 8.4% (1ml/kg)</b>         | 5.5ml                |
| <b>Anticonvulsants and drugs for raised ICP</b> |                      |
| <b>Lorazepam (0.1mg/kg)</b>                     | 0.55mg               |
| <b>Phenytoin (20mg/kg - over 20 mins)</b>       | 110mg                |
| <b>Phenobarbitone (20mg/kg)</b>                 | 110mg                |
| <b>Paraldehyde 50%:Olive oil 50% (0.8ml/kg)</b> | 4ml PR               |
| <b>Mannitol dose (0.25 - 0.5 g/kg)</b>          | 1 - 3grams           |
| <b>Mannitol volume Peripheral: 10% solution</b> | 14 - 28 ml           |
| <b>Mannitol volume Central: 20% solution</b>    | 7 - 14 ml            |
| <b>3% saline (3ml/kg)</b>                       | 17ml                 |

| <b>Drug doses for infusion:</b>   |  |                           |               | <b>Total</b>      |                              |  |
|---|--|---------------------------|---------------|-------------------|------------------------------|--|
| <b>Sedation</b>   | <b>Amount</b>  | <b>Diluent - see key*</b> | <b>Volume</b> | <b>Rate</b>       | <b>Dose</b>                  |  |
| <b>Morphine</b>   | 5.5mg  | D5/D10/NS                 | 50ml          | 0.5 - 2 ml/hr     | 10-40micrograms/kg/h         |  |
| <b>Midazolam</b>  | 16.5mg   | D5/D10/DS/NS              | 50ml          | 0.5 - 3 ml/hr     | 0.5-3 micrograms/kg/min      |  |
| <b>Paralysis</b>  |  |                           |               |                   |                              |  |
| <b>Rocuronium</b>   | Neat solution 100mg in 10ml  |                           |               | 0.33 - 0.55 ml/hr | 0.6 - 1mg/kg/h               |  |
| <b>Vecuronium</b>   | 33mg   | D5/D10/NS                 | 50ml          | 0.5 - 2ml/hr      | 1 - 4micrograms/kg/min       |  |
| <b>Vasoactive drugs</b>   |  |                           |               |                   |                              |  |
| <b>Dopamine</b>   | <i>Peripheral</i> 80mg   | D5/D10/NS                 | 50ml          | 1.0 - 4.1ml/hr    | 5 - 20micrograms/kg/min      |  |
|   | <i>Central</i> 82.5mg  | D5/D10/NS                 | 50ml          | 1 - 4 ml/hr       | 5 - 20micrograms/kg/min      |  |
| <b>Dobutamine</b>   | <i>Peripheral</i> 80mg   | D5/D10/NS                 | 50ml          | 1.0 - 4.1ml/hr    | 5 - 20micrograms/kg/min      |  |
|   | <i>Central</i> 82.5mg  | D5/D10/NS                 | 50ml          | 1 - 4 ml/hr       | 5 - 20micrograms/kg/min      |  |
| <b>Adrenaline</b>   | <i>Peripheral</i> 1mg  | D5/D10/NS                 | 50ml          | 0.17-8.3ml/hr     | 0.01 - 0.5 micrograms/kg/min |  |
|   | <i>Central</i> 1.65mg  | D5/D10/NS                 | 50ml          | 0.1 - 5 ml/hr     | 0.01 - 0.5micrograms/kg/min  |  |
| <b>Noradrenaline</b>  | <i>Central</i> 1.65mg  | D5/DS                     | 50ml          | 0.1 - 5 ml/hr     | 0.01 -0.5micrograms/kg/min   |  |
| <b>Ductal patency</b>   |  |                           |               |                   |                              |  |
| <b>Alprostadil (E1)</b>   | 50micrograms   | D5/D10/NS                 | 50ml          | 1.7 - 6.6 ml/hr   | 5 - 20nanograms/kg/min       |  |
| <b>Dinoprostone (E2)</b>  | 50micrograms   | D5/D10/NS                 | 50ml          | 1.7 - 6.6 ml/hr   | 5 - 20nanograms/kg/min       |  |
| <b>Asthma drugs</b>   |  |                           |               |                   |                              |  |
| <b>Salbutamol</b>   | <b>For Salbutamol bolus dose please refer to BNFC</b>                                      |                           |               |                   |                              |  |
|   | <i>Infusion Peripheral</i> 10mg  | D5/NS                     | 50ml          | 1.7 - 3.3 ml/hr   | 1 - 2micrograms/kg/min       |  |
|   | <i>Infusion Central</i> 25mg   | D5/NS                     | 50ml          | 0.7 - 1.3 ml/hr   | 1 - 2micrograms/kg/min       |  |
| <b>Aminophylline</b>  | <b>Loading dose: 27.5mg over 20 minutes; use 500mg/500ml concentration as per infusion</b> |                           |               |                   |                              |  |
| <b>Use ideal wt if obese</b>  | 500 mg   | D5                        | 500ml         | 5.5 ml/hr         | 1mg/kg/h                     |  |
| <b>If patient is aged greater than 12 years please refer to BNFC for aminophylline dosing</b> |  |                           |               |                   |                              |  |
| <b>Magnesium sulphate 50%</b>   | 0.44 ml  | D5/NS                     | 11 ml         | 33 ml/hr          | 220 mg over 20 mins          |  |
| <b>DKA drugs <i>Note: decimal point below</i></b>   |  |                           |               |                   |                              |  |
| <b>Insulin</b>  | 13.8units  | D5/D10/NS                 | 50ml          | 2 ml/hr           | 0.1units/kg/h                |  |

\*Diluent key: D5 = 5% glucose D10 = 10% glucose NS = 0.9% saline DS = 0.45% saline and 5% glucose