

**DOBUTAMINE****This drug must be guardrailed**

<b>Trade Name</b>	Dobutamine – Hameln 12.5 mg/mL (Max Health)
<b>Class</b>	Synthetic catecholamine
<b>Mechanism of Action</b>	Primarily Beta1-adrenergic activity. Inotropic vasopressor. Increases myocardial contractility. Decreases systemic vascular resistance Increases cardiac output.
<b>Indications</b>	Poor cardiac output Hypotension.
<b>Contraindications</b>	Known hypersensitivity to dobutamine and sodium metabisulfite. Idiopathic hypertrophic subaortic stenosis or other obstruction to left ventricular filling or emptying. Hypovolaemia, low cardiac filling pressure, arrhythmias. (Use with caution in patients with family history of asthma).
<b>Supplied As</b>	250mg dobutamine in 20 mL, with sodium metabisulfite.
<b>Dilution</b>	<b>See dobutamine infusion sheet:</b> Take $(30 \times \text{wt}(\text{kg})) \text{ in mg} \div 12.5$ and make up to 50mL with normal saline, 5% or 10% dextrose without heparin <b>1 mL/hr = 10 microgram/kg/min</b> <b>Max concentration 5mg/mL</b> – this may be exceeded if infusion is made “double strength” for bigger babies
<b>Dosage</b> <b>*Must chart guardrail and use Alaris pump*</b>	5-20 microgram/kg/minute. Titrate by monitoring effect.
<b>Guardrails</b>	Concentration: Min – 0.18mg/mL      Max – 5mg/mL Soft Min: 2 microgram/kg/min      Soft Max: 20 microgram/kg/min Hard Max: 25 microgram/kg/min      Default: 5 microgram/kg/min
<b>Interval</b>	Continuous iv infusion. Steady state reached in 10 minutes.
<b>Administration</b>	Continuous iv infusion. Need to make up infusion, place in syringe driver and use purge until solution is flowing prior to connecting to baby (or it make take up to an hour to reach the baby’s circulation).
<b>Compatible With</b>	5% dextrose, 10 % dextrose, 0.9% sodium chloride, TPN, Lipid. <b>Y site:</b> Adrenaline, alprostadil, amiodarone, atropine, caffeine citrate, dopamine, ephedrine, erythromycin, fentanyl, fluconazole, gentamicin, hydralazine, midazolam, morphine, nitroglycerine, nitroprusside, ranitidine pancuronium, propranolol, potassium chloride, tolazoline

<b>Incompatible With</b>	Aciclovir, aminophylline, amphotericin, benzyl penicillin, calcium chloride, calcium gluconate, cefazolin, diazepam, digoxin, furosemide, heparin*, insulin*, indometacin, magnesium sulphate, phenobarbital, phenytoin, propofol, sodium bicarbonate, sulphamethoxazole/trimethoprim, verapamil*. Do not use in combination with other agents or diluents containing sodium bisulphite.  *Variable compatibility results use separate lines if at all possible
<b>Monitoring</b>	Continuous heart rate and intra-arterial blood pressure preferably. If peripheral iv, monitor iv site.
<b>Stability</b>	Single use vial  Continuous infusions need to be changed after 24 hours  Pink discolouration is acceptable in the 24 hours after diluting
<b>Storage</b>	Below 30°C, protect from light.
<b>Adverse Reactions</b>	Ectopic beats, tachycardia, hypertension, hypotension, myocardial ischaemia, vomiting, hypokalaemia, cutaneous vasodilatation. Partial tolerance may develop after 72 hours, so higher doses may be needed. Extravasation may cause tissue ischaemia.
<b>Metabolism</b>	Metabolised by liver rapidly. Very short half-life (around 2 minutes). Renal excretion. Wide variability in clearance.
<b>Comments</b>	Increases cardiac output, in comparison with dopamine which may be better for hypotension. May be useful in hypotension related to low output states.  Correct hypovolaemia before giving dobutamine
<b>References</b>	<ol style="list-style-type: none"> <li>1. NZHPA notes on injectable drugs 5<sup>th</sup> Edition</li> <li>2. Trissel Handbook on Injectable Drugs 10<sup>th</sup> Edition Neofax 2000</li> <li>3. Medicines for Children RCPCH.</li> <li>4. Pediatrics 1992 89(1): 47-51.</li> <li>5. Neonatal dosing guidelines <a href="http://www.starship.org.nz">www.starship.org.nz</a></li> <li>6. Data Sheet <a href="http://www.medsafe.govt.nz">www.medsafe.govt.nz</a></li> <li>7. <a href="http://www.anmfonline.org">www.anmfonline.org</a></li> <li>8. Neofax in <a href="http://www.micromedexsolutions.com">www.micromedexsolutions.com</a></li> </ol>
<b>Updated By</b>	A Daniell, March 2001 P Schmidt & B Robertshawe February 2005 A Lynn, B Robertshawe July 2009, September 2009 A Lynn, B Robertshawe June 2012 (re-order profile) A Lynn, M Wallenstein, B Robertshawe Dec 2020 (update)