Dobutamine Infusion

NHS University Hospitals Sussex NHS Foundation Trust

1	Used for positive inotropic support in cardiac decompensation due to low output cardiac failure e.g. myocardial infarction, cardiogenic shock, heart failure.
2	Attach patient to cardiac monitor with BP monitoring (arterial line required)
3	• Use the ready diluted 250mg/50mL preparation • Central administration preferred due to low pH, but may also be given via a large peripheral vein (use more dilute solution if possible, for example 250 mg/250mL). Concentrations greater than 1 mg/mL via central line only.
4	The rate of administration and the duration of therapy should be adjusted according to the patient's response as determined by heart rate, blood pressure, urine flow, and if possible, measurement of cardiac output.
6	**Dose calculation:** mg required/hour = $\frac{\text{dose (micrograms/kg/min) x weight (kg) x 60 (minutes)}}{1000}$ Infusion rate = $\frac{\text{mg required/hour x infusion total volume of solution prepared}}{\text{Number of mg in prepared solution}}$
7	**For example:** Infusion rate for 250mg/50mL solution for 80 kg patient at rate of 5 micrograms/kg/min: mg required/hour = $\frac{\text{5 micrograms/kg/min x 80 kg x 60 (minutes)}}{1000}$ = **24 mg/h** Infusion rate = $\frac{\text{24 mg/h x 50 mL}}{\text{250 mg}}$ = **4.8 mL/h**

Dosing table for dobutamine 250mg/50mL

Weight (kg)	Infusion rate calculated from Dose (microgram/kg/min) which provides m/l hour infusion rate			
	2.5 microgram	**5.0 microgram**	**7.5 microgram**	**10 microgram**
50	1.5ml/hr	3.0 ml/hr	4.5 ml/hr	6.0 ml/hr
55	1.65 ml/hr	3.3 ml/hr	4.95 ml/hr	6.6 ml/hr
60	1.8 ml/hr	3.6 ml/hr	5.4 ml/hr	7.2 ml/hr
65	1.95 ml/hr	3.9 ml/hr	5.85 ml/hr	7.8 ml/hr
70	2.1 ml/hr	4.2 ml/hr	6.3 ml/hr	8.4 ml/hr
75	2.25 ml/hr	4.5 ml/hr	6.75 ml/hr	9.0 ml/hr
80	2.4 ml/hr	4.8 ml/hr	7.2 ml/hr	9.6 ml/hr
85	2.55 ml/hr	5.1 ml/hr	7.65 ml/hr	10.2 ml/hr
90	2.7 ml/hr	5.4 ml/hr	8.1 ml/hr	10.8 ml/hr
95	2.85 ml/hr	5.7 ml/hr	8.55 ml/hr	11.4 ml/hr
100	3.0 ml/hr	6.0 ml/hr	9.0 ml/hr	12.0 ml/hr