# Dobutamine Intravenous for Adults



### Who can administer

Administration RESTRICTED: see Appendix 1

### Important information

Cardiovascular monitoring required (see monitoring requirements)

For Y-site compatibility see below

### Available preparations

Dobutamine 250mg per 20ml ampoule

### Reconstitution

Already in solution

#### Draw up using a 5 micron filter needle

Dilute further prior to administration

#### Infusion fluids

Sodium chloride 0.9% or Glucose 5%

### Methods of intravenous administration

#### Continuous intravenous infusion(adminster using an electronically controlled infusion device)

Add 250mg dobutamine to make a final volume of 50ml, 250ml or 500ml of infusion fluid:

Amount to add (mg)	Final vol (ml)	Final concentration		
250mg	50ml	5mg per ml (5,000micrograms per ml) (usual strength)	Central line only (unless as part of St Marys ward protocol- CLN-CR-083)	
250mg	250ml	1mg per ml (1,000 micrograms per ml)	Central line or large peripheral vein <sup>(ref 2)</sup>	
250mg	500ml	0.5mg per ml (500 micrograms per ml)		

- Set up as a continuous infusion and adjust rate according to dose information opposite
- Fluid restricted patients: If absolutely necessary, anecdotal evidence suggests a 10mg/ml or even undiluted solution may be given via a **central line** <sup>(ref 1)</sup>

### Dose in adults

#### Usual dose

• 2.5 to 10 microgram/kg/minute, adjusted according to response

- For a 70kg patient (using 250mg in 50ml) this corresponds to 2.1 to 8.4ml/hour
- Doses up to 40 microgram/kg/minute have been required, but this is rare
- It is recommended that treatment with dobutamine should be discontinued gradually

Using a 250mg in 50ml solution							
Dose (micrograms/kg/minute)	2.5	5	7.5	10			
Weight (KG)	Rate in ml per hour						
40	1.2	2.4	3.6	4.8			
45	1.4	2.7	4	5.4			
50	1.5	3	4.5	6			
55	1.7	3.3	5	6.6			
60	1.8	3.6	5.4	7.2			
65	2	3.9	5.9	7.8			
70	2.1	4.2	6.3	8.4			
75	2.3	4.5	6.8	9			
80	2.4	4.8	7.2	9.6			
85	2.6	5.1	7.7	10.2			
90	2.7	5.4	8.1	10.8			
95	2.9	5.7	8.6	11.4			
100	3	6	9	12			
105	3.2	6.3	9.5	12.6			
110	3.3	6.6	9.9	13.2			
115	3.5	6.9	10.4	13.8			
120	3.6	7.2	10.8	14.4			

#### Table 1: Dobutamine 250mg in 50ml (5mg per ml) - rates of administration

#### **Other concentrations**

- If using a **250mg in 250ml** strength (**1**mg/ml)- you can **multiply the rates in Table 1 by five** to get the appropriate rate in ml/hour
- Example: for a 95kg patient on 5 micrograms/kg/minute- using a 250mg in 50ml solution, the rate is 5.7ml per hour. If using a 250mg in 250ml strength, the rate is 28.5ml per hour

### Monitoring

- Heart rate and rhythm, arterial blood pressure and infusion rate should be monitored closely
- **Telemetry monitoring required** (But see also guideline 'Continuous Dobutamine infusion in the treatment of refractory fluid overload in patients with Advanced Heart Failure in St Marys ward in University Hospital Galway'- see Q-Pulse document CLN-CR-083- telemetry monitoring may not be required in a certain subset of patients)

# Further information

- Solutions of dobutamine may have a pink discolouration
- This discolouration, which will increase with time results from a slight oxidation of the drug
- However there is no significant loss of drug potency during the 24 hour infusion period
- For information concerning continuous **dobutamine infusion** in the treatment of refractory fluid overload **in ward areas**, see Q pulse policy CLN-CR-083

# Storage

- Store below 25°C
- A slight pink discoloration should not concern those administering the drug

# References

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- 1: Critical care group. Minimum infusion volumes 4th edition 2012
- 2: Injectable Medicines Administration Guide Medusa downloaded 18/02/2025

### Therapeutic classification

Inotropic sympathomimetics