

# 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)<br><b>(usual strength)</b> | Central line only (unless as part of St Marys ward protocol-<br><a href="#">CLN-CR-083</a> ) |
| 250mg              | 250ml          | 1mg per ml (1,000 micrograms per ml)                           | Central line or large peripheral vein (ref 2)  |
| 250mg              | 500ml          | 0.5mg per ml (500 micrograms per ml)                           |  |

- Set up as a continuous infusion and adjust rate according to dose information opposite
- Provided the concentration is not >5mg/ml, larger volumes of infusion may be prepared e.g. 500mg in 100ml
- **Fluid restricted patients:** If absolutely necessary, anecdotal evidence suggests a 10mg/ml or even undiluted solution may be given via a **central line** (ref 1)

# 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 (1mg/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<sup>0</sup>C
- A slight pink discoloration should not concern those administering the drug

## References

SPC November 2020

1: Critical care group. Minimum infusion volumes 4th edition 2012

2: Injectable Medicines Administration Guide Medusa downloaded 8th Dec 2021

## Therapeutic classification

Inotropic sympathomimetics