This is a High Risk Medication
An overdose can be rapidly fatal.

Dose and Indications

Circulatory Support

Hypoperfusion, hypotension related to myocardial dysfunction

Severe sepsis and septic shock

Intravenous infusion

5 to 20 microgram/kg/minute

Start at 5 microgram/kg/minute and titrate dose every 10-20 minutes if required according to clinical response.
Preparation and Administration

**Intravenous Infusion**

Administer preferably via a central line but may be used peripherally in an emergency when central access is not available.

Select the strength required based on the weight of the infant in the context of any fluid restrictions. Maximum concentration for infusion is 4000 microgram/mL.

DOBUTamine Concentration Selection Tables can be found on the following pages of this guideline to assist prescribers to gauge which strength is best for the patient.

Dilute the appropriate volume of the 250mg/20mL DOBUTamine solution using compatible fluid; and administer by continuous infusion. Diluted preparation is stable for 24 hours at room temperature. Discard any remaining solution.

The three standard concentrations to select from are:

- DOBUTamine 1000 microgram/mL (1mg/mL)
- DOBUTamine 2000 microgram/mL (2mg/mL)
- DOBUTamine 4000 microgram/mL (4mg/mL)

**Formulae**

To calculate infusion rate (mL/hr):

\[
\text{Rate (mL/hr)} = \frac{60 \times \text{Dose (microgram/kg/min)} \times \text{Weight (kg)}}{\text{Strength (microgram/mL)}}
\]

To calculate the dose (microgram/kg/min):

\[
\text{Dose (microgram/kg/min)} = \frac{\text{Rate (mL/hr)} \times \text{Strength (microgram/mL)}}{60 \times \text{Weight (kg)}}
\]
DOBUTamine Concentration Selection Tables

**DOBUTamine 1000microgram/mL**

**To make 25mL syringe:**
Dilate 2mL DOBUTamine (12.5mg/mL) with 23mL of compatible fluid (total of 25mL). The resulting solution contains 1000microgram/mL

**To make 50mL syringe:**
Dilate 4mL DOBUTamine (12.5mg/mL) with 46mL of compatible fluid (total of 50mL). The resulting solution contains 1000microgram/mL

**Table ONE: Concentration selection table for DOBUTamine 1000microgram/mL**
Recommended for neonates weighing <1kg

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<th>Rate (mL/hr)</th>
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**DOBUTamine 2000microgram/mL**

**To make 25mL syringe:**
Dilate 4mL DOBUTamine (12.5mg/mL) with 21mL of compatible fluid (total of 25mL). The resulting solution contains 2000microgram/mL

**To make 50mL syringe:**
Dilate 8mL DOBUTamine (12.5mg/mL) with 42mL of compatible fluid (total of 50mL). The resulting solution contains 2000microgram/mL

**Table TWO: Concentration selection table for DOBUTamine 2000microgram/mL**
Generally used for neonates weighing 1kg to 3kg

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**DOBUTamine 4000microgram/mL**

**To make 25mL syringe:**
Dilute 8mL DOBUTamine (12.5mg/mL) with 17mL of compatible fluid (total of 25mL). The resulting solution contains 4000microgram/mL.

**To make 50mL syringe:**
Dilute 16mL DOBUTamine (12.5mg/mL) with 34mL of compatible fluid (total of 50mL). The resulting solution contains 4000microgram/mL.

**Table 3: Concentration selection table for DOBUTamine 4000microgram/mL**
Generally used for neonates >3kg

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**Compatible Fluids**
Glucose 5%, glucose 10%, glucose / sodium chloride combinations, sodium chloride 0.9%

**Adverse Effects**

**Common**
Tachycardia, increased blood pressure, ventricular ectopic activity, hypotension (if patient is hypovolemic)

**Infrequent**
Phlebitis, rash, ventricular tachycardia or fibrillation, cutaneous vasodilation

**Rare**
Allergic reaction (due to sodium metabisulfite)

**Monitoring**
- Observe intravenous site for inflammation, extravasation, and extreme vasoconstriction (tracking)
- Continuous heart rate
- Invasive blood pressure monitoring is recommended
Practice Points

> Contraindications include ventricular arrhythmias, rapid atrial fibrillation and phaeochromocytoma.
> Hypovolaemia - should be corrected prior to DOBUTamine administration
> DOBUTamine is incompatible with alkaline solutions (e.g., sodium bicarbonate, phenytoin).
> DOBUTamine is considered Y-site compatible with parenteral nutrition (PN) and lipid emulsions where DOBUTamine concentration is 4000 microgram/mL or weaker. Co-infusion with PN or lipid emulsions with inotropic agents can result in pulsatile flow of inotropic agents and should only occur if there is no alternative line access.
> Do not bolus other drugs via a line which shares a Y-site with DOBUTamine infusion as this may cause haemodynamic instability.
> Caution when changing IV line (avoid bolus or prolonged interruption of drug infusion).
> DOBUTamine solutions may show a pink discolouration which increases with time. This colour is due to a slight oxidation of the drug. However, there is no significant loss of drug within the recommended storage times for solutions of the drug.