

## Who can administer

Administration RESTRICTED - see [Appendix 1](#)

## Important information

- Monitoring requirements - see below
- Doxapram infusion is listed as a licensed preparation - however, it is not marketed in Ireland. We are therefore suggesting preparing an infusion using the ampoules if an infusion is required

## Available preparations

Doxapram 100mg per 5ml ampoule

## Reconstitution

Already in solution

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

## Infusion fluids

Ampoules: Usually not required - product ready for injection

Infusion required: prepare using Glucose 5%

## Methods of intravenous administration

### **Bolus intravenous injection**

- Administer required dose over at least 30 seconds
- May be repeated at one hour intervals if needed

### **Intermittent intravenous infusion**

- Prepare an infusion containing 2mg/ml as follows:
- Add 5 ampoules of 100mg/5ml (=500mg/25ml) to 225ml infusion fluid; (unlicensed method of preparation)
- Administer as per 'Dose below'
- Administer concurrently with oxygen

## Dose in adults

### **Post-operative use (using intravenous injection)**

- Administer 1 to 1.5mg/kg by intravenous bolus administration over at least 30 seconds
- May be repeated at one hour intervals if needed

### **Post-operative use (using intravenous infusion)**

- Recommended dosage is 2 to 3 mg per minute (=60 to 90ml/hour of a 2mg/ml solution)

- Adjust dose according to the response of the patient
- Maximum dose 4mg/minute

### Acute respiratory failure (using intravenous infusion)

- Administer 1.5 to 4mg per minute, depending on the condition and response of the patient
- Administer concurrently with oxygen
- The following dosage schedule has been shown to result in the rapid production of a steady state plasma concentration of doxapram

Respiratory stimulant	Dose	Rate in ml/hour using;infusion containing 500mg/250ml (2mg/ml)
<b>0-15 minutes</b>	Give 4mg per minute	120ml per hour
<b>15 to 30 minutes</b>	Give 3mg per minute	90ml per hour
<b>30 to 60 minutes</b>	Give 2mg per minute	60ml per hour
<b>60 minutes onwards</b>	Give 1.5mg per minute	45 ml per hour
<b>Maximum dose</b>	4mg per minute	

### Liver impairment

- As doxapram is primarily metabolised by the liver, use with care in patients with hepatic dysfunction

## Monitoring

- Frequent arterial blood gas measurements are necessary
- Blood pressure, and deep tendon reflexes should be monitored

## Further information

- Doxapram should be administered concurrently with oxygen to patients with severe irreversible airways obstruction or severely decreased lung compliance, due to the increased work of breathing in these patients
- Doxapram should be used in conjunction with a beta-2 agonist in patients presenting with bronchoconstriction, to reduce the amount of respiratory effort
- Respiratory stimulant effect of doxapram may not outlast the residual effects of the depressant drugs - patients will need to be closely monitored until fully alert for 30 to 60 minutes. Doxapram may temporarily mask the residual effects of curare-type muscle relaxants
- Should be used with caution for patients who receiving sympathomimetic agents since an additive pressor effect may occur
- Do not use with mechanical ventilation
- The infusion may also be prepared in sodium chloride 0.9% if required - but consider sodium load in patients with impaired cardiac function <sup>(ref 1)</sup>
- **Refer to SPC for other precautions**

## Storage

- Store below 25°C
- Do not refrigerate

## References

SPC Doxapram injection September 2022

SPC Doxapram infusion September 2020

1: Injectable Medicines guide, downloaded from Medusa 13th Jan 2023

## Therapeutic classification

Respiratory stimulant