

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) |
|---------------------------|-----------------------|--|
| 0-15 minutes | Give 4mg per minute | 120ml per hour |
| 15 to 30 minutes | Give 3mg per minute | 90ml per hour |
| 30 to 60 minutes | Give 2mg per minute | 60ml per hour |
| 60 minutes onwards | Give 1.5mg per minute | 45 ml per hour |
| Maximum dose | 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 ^(ref 1)
- **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