Diazepam Intravenous Solution for Adults

Who can administer

Administration RESTRICTED - see Appendix 1

Important information

- Injection solution contains **ethanol**
- Injection solution also contains **propylene glycol -Â** toxicity may be a concern in patients maintained on continuous infusions especially those with renal or hepatic impairment
- Diazepam **solution**Â carries a greater risk of thrombophlebitis and venous thrombosis than the **lipid emulsion** product (no longer available)

Available preparations

Diazepam Injection 10mg in 2ml (Hameln brand)

Reconstitution

Already in solution

Use a 5 micron filter needle when drawing up contents of ampoule

Infusion fluids

Glucose 5% or Sodium chloride 0.9%

Methods of intravenous administration

Slow intravenous injection

- Do not dilute (as precipitation may occur) (see further information)
- Administer into a large vein, no faster than 5mg per minute [ref 1]

Continuous intravenous infusion (administer using an electronically controlled infusion device)

- Administer into a large vein
- For 10mg dose use 250ml infusion. For larger doses no more than 40mg per 500ml diluent may be added [ref 1]
- Rate is variable - see under 'Dose'
- **Incompatible with PVC**. Non-PVC infusion container (e.g.Braun Ecoflac or Baxter Viaflo are suitable) and a **low adsorption giving set** (e.g.Baxter Ref; VMC 9606, or Braun 8700110SP) must be used. (available from pharmacy)
- **A new infusion bag must be prepared every 6 hours**

Dose in adults

IMPORTANT: Elderly and debilitated patients should be given doses at the **lower end of the dose ranges**, due to increased sensitivity to the drug

Tetanus

- Give 0.1 to 0.3 mg/kg by slow intravenous injection every 1 to 4 hours as required
- Alternatively, a continuous infusion of 3 to 10mg per kg over 24 hours may be used
- **Example of calculations for continuous infusion**
  - Patient weighs 65kg
  - Dose is 2mg per kg in 24 hours = 130mg in 24 hours = 5.4mg per hour
  - A new infusion must be prepared every six hours - suggest preparing 40mg in 500ml diluent = 0.08mg per ml , = approx 67.5ml/hr
  - **Discard infusion bag after six hours, the infusion must be replaced with a freshly prepared one**

Renal impairment [ref 2]

- Start with small doses, titrate to response
- At high doses, propylene glycol toxicity may pose a risk- see SPC

Hepatic impairment

- Avoid if possible as may precipitate encephalopathy
- Contraindicated in severe liver disease
- At high doses, propylene glycol toxicity may pose a risk- see SPC

Chronic respiratory insufficiency

- Increased risk of respiratory depression - lower doses are recommended
- Very slow intravenous administration is recommended
- Contraindicated in **severe** respiratory insufficiency

Monitoring

- Monitor administration site closely for extravasation and re-site cannula at first signs of inflammation
- It is advisable to keep the patient in a supine position, and monitor for at least one hour post dose [ref 1]
- Monitor cardiorespiratory function

Further information

- AVOID subcutaneous use
- When being given by intravenous injection, the solution cannot be diluted further. When being given by intravenous infusion, it can be added to infusion fluid. The apparent contradiction is because when it is diluted in a large volume the stability is protected. If diluted in a small volume of fluid, the drug will precipitate out.

Storage

- Store below 25^{O} C
- Do not freeze

References

UK SPC 07/05/2025

1: Injectable medicines information Medusa, downloaded 13/05/2025

2: Renal drug database- accessed online 13/05/2025

Therapeutic classification

Benzodiazepine