Furosemide Intravenous for Adults

Who can administer

May be administered by registered competent doctor or nurse/midwife

Important information

- High pH: Administer via a central venous access device or via large peripheral vein
- For Y-site compatibility see below

Available preparations

Furosemide 50mg per 5ml ampoule

Furosemide injection 20mg per 2ml ampoule

Reconstitution

Already in solution

Draw up using a 5 micron filter needle

Infusion fluids

Sodium chloride 0.9%

Methods of intravenous administration

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

- May be given diluted in any volume of sodium chloride 0.9% (e.g. 50ml)(ref 1), however the rate of administration must not exceed **4mg per minute** (i.e. 40mg in 10 minutes, 80mg in 20minutes, 120mg in 30minutes)
- If a 50ml infusion volume is used the residual volume in the infusion line must be flushed through at the same rate to avoid significant underdosing
- **Maximum** rate of administration in **severe renal impairment** (serum creatinine greater than 440micromol/L) is **2.5mg per minute**

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

- May be given diluted in any volume of sodium chloride 0.9% and administered as a continuous infusion, rate adjusted according to the dose required **(maximum rate 4mg per minute)**
- Can also be given **undiluted** (ref 1)
- Maximum rate of administration in severe renal impairment (serum creatinine greater than 440micromol/L) is **2.5mg per minute**

Slow intravenous injection (doses of up to 50mg): Not advised. Rate makes this impractical.

- Administer at a **maximum** rate of **4mg per minute**
- **Maximum** rate of administration in severe renal impairment (serum creatinine greater than 440micromol/L) is **2.5mg per minute.**

Dose in adults

Usual dose

- A dose of 20 to 50mg may be given initially, increased if necessary in steps of 20mg, the increases not more often than every 2 hours. (according to BNF)
- The interval between doses is a clinical decision based on the patient status and response to treatment
- The maximum licensed dose by the IV route is 1500mg per day.

Renal impairment

- Maximum rate of infusion in severe renal impairment: 2.5mg/minute.

Monitoring

- Monitor serum potassium, sodium and serum creatinine levels
- Monitor blood glucose, blood pressure

Further information

- Furosemide may precipitate in solutions of low pH and therefore sodium chloride 0.9% is the ONLY suitable infusion fluid
- Rapid administration (greater than 4mg/min) and high doses may cause tinnitus and deafness (ref 1)
- To achieve optimum efficacy and suppress counter regulation, a continuous infusion is preferred to repeated bolus injections
- Formerly known as frusemide

Storage

- Store below 25ºC
- Do not refrigerate or freeze

References

20mg/2ml, 50mg/2ml Mercury April 2024

Lasix 20mg/2ml SPC February 2023

1: Injectable Medicines Administration Guide Medusa downloaded 16/06/2025

Therapeutic classification

Loop diuretic