Amphotericin (Liposomal) - AmBisome Intravenous Infusion for Adults

Who can administer

May be administered by registered competent doctor or nurse/midwife

Important information

- Prescribe by **brand name** - Ambisome is **not** interchangeable with other amphotericin preparations
- **Initial test dose must be given** before each new course of this drug - in case of anaphylaxis (but see Further information below)
- Line must be **flushed before and after** with Glucose 5%
- **Reserve antimicrobial**: Restricted to indications in the antimicrobial prescribing guidelines, or following approval by microbiology/infectious diseases
- AmBisome contains soya oil. Should not be used in patients with **peanut or soya allergy**

Available preparations

AmBisome 50mg vial (50,000 units encapsulated in liposomes))

Reconstitution

Water for injection

- Add 12ml per 50mg vial and **immediately shake** vials vigorously for 30 seconds or longer
- This produces a dispersion of 50mg in 12.5mL (4mg/1ml))
- Withdraw calculated amount of Ambisome into a sterile syringe and **dilute further prior to administration**
- Using the 5 micron filter provided, add the required dose to a suitable volume of infusion fluid
- Use a new filter for each vial [ref 1]

Infusion fluids

Glucose 5% **ONLY**

Methods of intravenous administration

Flush line before and after with Glucose 5%

Intermittent intravenous infusion (using an electronically controlled infusion device)

Test dose required (1mg over 10 minutes) - see below

The volume for dilution depends on dose as the final concentration must be between 0.2 and 2mg/ml

Dose	Final recommended infusion volume	Nearest available bag/bottle size
50mg (in 12.5ml)	25 to 250ml	100 or 250ml bag (* see below)
70mg (in 17.5ml)	35 to 350ml	100 or 250ml bag (* see below)
100mg (in 25ml)	50 to 500ml	100, 250 or 500ml bag (* see below)
150mg (in 37.5ml)	75 to 750ml	100, 250 or 500ml bag
200mg (in 50ml)	100 to 1000ml	100, 250, 500 or 1000ml bag
300mg (in 75ml)	150 to 1500ml	250, 500 or 1000ml bag
400mg (in 100ml)	200 to 2000ml	250, 500 or 1000ml bag
500mg (in 125ml)	250 to 2500ml	250, 500 or 1000ml bag

- Withdraw the same volume from the infusion bag as the volume of drug to be added e.g 100mg dose - remove 25ml from bag before addition of drug
- **Administration rate**
  - Doses up to and including 5mg/kg - administer over 30 to 60 minutes
  - Doses greater than 5mg/kg should be given over 120 minutes
  - **See under Monitoring re management of infusion related reactions**
- *Doses of 50 to 100mg may be added to a 50ml infusion if required (eg fluid restriction) but the residual volume in the infusion line must be flushed through at the same rate to avoid significant underdosing

Fluid restriction [ref 2]

- Critical care units only
- Some centres have used 4mg/ml via central line (anecdotal)

Dose in adults

Test dose

- All patients must receive a test dose before a new course of drug. **In order to minimise waste of a very expensive product**, prepare as follows
- Make up the dose for day 1 in the largest allowable volume e.g. 200mg in 1000mL
- Calculate the volume which contains 1mg
- Set the pump at a rate which will deliver the 1mg dose over 10 minutes
- Stop the infusion pump, and **observe the patient for 30 minutes**
- If no severe allergic or adverse reactions develop, restart the infusion pump and administer the remainder of the dose over 30 to 60 minutes

Micro/ID consult recommended for all patients and indications

Treatment of fever of unknown origin in neutropenic patients

- Give 3mg/kg once daily

Treatment of systemic fungal infections

- Give 1 to 3mg/kg once daily

Prophylaxis in neutropenic patients (unlicensed) [ref 3]

- Give 1mg/kg three times per week
- Doses tend to be rounded to vial size- usually rounded up- ie 80kg give 100mg, 45kg, give 50mg

Notes

- Higher doses (up to 10mg/kg - single one-off dose) may rarely be indicated (e.g.Cryptococcal meningitis) [ref 4]- **used on direction of Micro/ID only**

Renal impairment

- Ambisome has been successfully administered to patients with pre-existing renal impairment in clinical trials, and no adjustment in dose or frequency of administration was required
- Caution should be exercised particularly when prolonged therapy is required
- If clinically significant reduction in renal function or worsening of other parameters occurs, consideration should be given to dose reduction, treatment interruption or discontinuation

Monitoring

- Monitor potassium, magnesium, and renal function - before and during treatment
- If potassium levels are decreased, consider amiloride 5mg po once daily [unlicensed] with potassium supplements. Magnesium replacement may also be needed
- Monitor LFTs and blood counts
- **Infusion related reactions** - monitor for infusion related reactions at every infusion
    - If **severe** anaphylactic/anaphylactoid reaction occurs- **stop the infusion.** The patient should not receive any further liposomal amphotericin infusions
    - If **non-severe** infusion rate reaction
        - Consider pausing the infusion and observe the patient [ref 1]
        - These reactions resolve rapidly on stopping the infusion and may not occur with every subsequent dose [ref 1]
        - Slower infusion times are recommended e.g. 120 minutes
        - Routine doses of antihistamines, paracetamol, and/or hydrocortisone have been reported as successful in the prevention or treatment of infusion related reactions

Further information

- **Test dose:** The UK SPC no longer recommends a test dose. However the Irish SPC still recommends a test dose - confirmed with Gilead March 2025 that we should continue to follow Irish SPC guidance [ref 5]

Storage

- Unopened vials: store below 25^{0}C
- Infusion: once diluted in Glucose 5% should be used as soon as possible

References

SPC April 2024

1: Injectable medicines guide, downloaded from Medusa 25/02/2025

2: Minimum Infusion Volumes UKCPA December 2012 - accessed 13/03/2025

3. GUH guidelines for the management of neutropenic sepsis July 2014 Q pulse CLN-HAEM-020

4: Single-Dose Liposomal Amphotericin B Treatment for Cryptococcal Meningitis NEJM March 24, 2022 vol. 386 no. 12 (attached)

5: Email correspondence on file from Gilead Sciences, Feb 27th 2025

Therapeutic classification

Antifungal

BNF
Fungal infection