Co-trimoxazole Intravenous Infusion for Adults

Who can administer

May be administered by registered competent doctor or nurse/midwife

Important information

- **Confusion and medication errors have occurred** because of the different expression of dose in the European and the USA markets: **take GREAT care if using USA references** (in USA- doses are generally expressed based on trimethoprim component only- rather than on the combination of trimethoprim/sulfamethoxazole)
- Ensure **high doses used for PJP (PCP)** infection -see below
- **High doses** require **large volume** infusions - read "Methods of intravenous administration" carefully
- Monitoring requirements -see overleaf
- See under 'Dose' for adjustments required in **renal** impairment
- Can cause rare but **serious skin adverse effects**, e.g. Stevens-Johnson syndrome, and other adverse effects such as **blood dyscrasias**, especially in elderly patients
- This medicine may cause venous irritation and tissue damage in cases of **extravasation**.
- For Y-site compatibility see below

Available preparations

Septrin 480mg per 5ml ampoule

Reconstitution

Already in solution

Draw up using a 5 micron filter needle

Dilute further prior to administration

Infusion fluids

Glucose 5% must be used for all fluid restricted patients under (a) below

Sodium chloride 0.9% can be used if using dilution specified under (b) below

Methods of intravenous administration

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

a: Fluid restricted (e.g. PJP treatment- as high doses involved) [ref 1]

- To avoid crystalisation **each 1ml** of injection solution (480mg/5ml) MUST be diluted to a **minimum of 15ml** Glucose 5% **ONLY**
- Administer required dose over 60 minutes **(reduced stability so shorter infusion time needed)**
- **Examples given in table below**
- Check for haze or precipitation **during preparation or administration**- discard if present

Dose	Minimum volume of Glucose 5% to use
480mg	75ml
960mg	150ml
1200mg	187.5ml
1440mg	225ml
1680mg	262.5ml
1920mg	300ml
2160mg	337.5ml
2400mg	375ml
2640mg	412.5ml
2880mg	450ml
3120mg	487.5ml
3360mg	525ml
3600mg	562.5ml

Round diluent volume up to nearest volume for other doses. e.g. for a dose of 2500mg- administer in a minimum volume of 412.5ml

b: If not fluid restricted

- Each ml of injection solution to be added to 25ml infusion solution
- Add 5ml solution (480mg) to 125ml infusion solution
- Add 10ml solution (960mg) to 250ml infusion solution
- Add 15ml solution (1440mg) to 375ml infusion solution (round to 500ml for convenience)
- Administer required dose over 60 to 90 minutes

c: Central line **(ref 1)**

- Anecdotal evidence suggests that as a **last resort**, cotrimoxazole may be administered undiluted as an infusion via a central line, over 90 to 120 minutes (unlicensed, ref 1)
- Usually restricted to critical care areas (ref 1)

Should haze or precipitation appear in the solution at any time before or during an infusion, the mixture should be discarded.

Dose in adults

IMPORTANT: Doses below refer to the combination of sulfamethoxazole and trimethoprim- take care if using references that are basing doses on trimethoprim component alone (typically USA references)

PJP (PCP) treatment

- **Discussion with Micro/ID is recommended**
- Give 120mg/kg/**day** divided into a 6 to 8 hourly dosing regimen for 14 to 21 days (non HIV), or 21 days (HIV) [ref 2]
    - e.g. 30mg/kg every 6 hours
    - For a 70kg patient: 70x120 = 8,400mg daily, dosing regimen would be 2,100mg every 6 hours (round dose to nearest 480mg=1920mg)
- In severe disease consider oral switch at same dose when clinically improving.
- In mild to moderate disease consider oral route from outset.

Stenotrophomonas maltophilia

- Consult with Micro/ID

Suspected bacterial meningitis with penicillin allergy

- Consult GAPP app for co-trimoxazole dosing for treatment of suspected bacterial meningitis with penicillin allergy and at risk for *L. monocytogenes*
- Consult with Microbiology or Infectious Diseases is recommended

Other non-PJP (PCP) infections

- Give 960mg to 1440mg every twelve hours depending on severity of infection

Patients who are nil by mouth [ref 2]

- The same dose can be given by the IV route as the oral route e.g. for PJP **prophylaxis** 960mg bd three times a week can be given IV

Renal impairment (treatment doses only)[ref 2]

- Monitor levels as advised by Micro/ID

eGFR (ml/min/1.73m^2)	Dose to use (applies to TREATMENT doses only)
Above 30	As in normal renal function
15 to 30	**For PJP:** give usual dose for three days, then reduce to 30mg/kg twice daily **For other indications:** give 50% of dose from day 1
Less than 15	**Only use if haemodialysis facilities available** **For PJP:** give 50% of dose from day one i.e. 30mg/kg twice daily **For other indications:** Avoid if possible if levels cannot be monitored (or use 50% of dose if Micro/ID approved)
Renal replacement therapy	Consult pharmacy or specialist literature sources

Hepatic impairment

- The BNF advises to avoid in severe hepatic impairment

Monitoring

- Monitor FBC when given long term, or in folate deficient patients, or in elderly patients
- Serum potassium and sodium in patients at risk of hyperkalaemia and hyponatraemia

Further information

- 480mg = 400mg sulfamethoxazole and 80mg of trimethoprim (doses refer to the combination)
- Ensure **adequate hydration** to prevent crystalluria
- **Glucose 5% is the only suitable infusion fluid for fluid restricted regimens** - for stability reasons
- Search synonym for intranet (Cotrimoxazole)

Storage

Store below 25^{0}C

References

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1: Medusa Injectable medicines guide, downloaded 06/02/2025

2: GUH Antimicrobial Guidelines Accessed online 12/02/2025

3: Sanford guide to Antimicrobial therapy, accessed online 12/02/2025

Therapeutic classification

Antibiotic