Benzylpenicillin Intravenous for Adults

Who can administer

May be administered by registered competent doctor or nurse/midwife

Important information

- **Penicillin** antibiotic
- See under 'Dose' for adjustments required in **renal** impairment
- Contains 1.68mmol sodium per 600mg

Available preparations

Crystapen 600mg (1 mega unit) powder

Reconstitution

For slow intravenous injection

- Add 4ml of Water for Injections or Sodium chloride 0.9% to each 600mg vial
- Dilute further to a final volume of 600mg/10ml, 1.2g/20ml [ref 1]

For intravenous infusion

- Add 4ml Water for Injections or Sodium chloride 0.9% to each 600mg vial
- Sodium chloride 0.9% infusion bag: a transfer device may be used to add the contents of the Benzylpenicillin vial to the bag

Infusion fluids

Sodium chloride 0.9% or Glucose 5% (ref 1)

Methods of intravenous administration

Can use either method of administration- choice depends on practicalities such as time available, fluid status of patient, etc

Slow intravenous injection [ref 1]

- Doses up to 1.2g: administer slowly over 5 minutes
- Doses greater than 1.2g - maximum rate of administration 300mg/minute
    - Give 2.4g dose over at least 8 minutes (may be preferable to give this dose as infusion

due to time required for slow intravenous injection)
    - Too rapid an injection rate may result in high levels, causing irritation to the central nervous system and/or electrolyte imbalance

Intermittent intravenous infusion

- Add required dose to **100ml sodium chloride 0.9%** [ref 1] and administer over 30 to 60 minutes
- A 50ml infusion may be used for doses of 2.4g or less 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

Dose in adults

Usual dose

- Give 600mg (1 Megaunit) to 1.2g every six hours [BNF] (increased if necessary in more serious infections - see below)

Acute pharyngitis or tonsillitis[ref 2]

- Give 1.2g every four hours

Necrotising fascitits/gas gangrene [ref 2]

- Give 2.4g every four hours

Meningococcal disease

- Give 2.4g every four hours

Intrapartum prophylaxis against group B Streptococcal infection

- Initially 3g stat, then 1.5g every four hours until delivery
- See Q pulse CLN-LW-0033 guideline

Renal impairment[ref 2]

Increased incidence of neurotoxicity in renal impairment (seizures)

eGFR (mL/min/1.73m^2)	Dose (use higher end of dose range for severe infections e.g. endocarditis)
20 to 50	Dose as in normal renal function
10 to 20	600mg to 2.4g every six hours
less than 10	600mg to 1.2g every six hours
Renal replacement therapies	Consult specialist text or pharmacy

Further information

- **Skin sensitisation** may occur in persons handling benzylpenicillin - care should be taken to avoid contact with the substance

Storage

Store below 25^{0}C

References

SPC April 2006

1: Medusa Injectable Medicines Administration Guide downloaded 05/03/2025

2: GUH antimicrobial guidelines 2021

Search synonym Benzyl penicillin

Therapeutic classification

Penicillin antibiotic