

IMIPENEM-CILASTATIN

BRAND NAME	PRIMAXIN
DRUG CLASS	Carbapenem antibiotic
AVAILABILITY	Vial contains 500 mg of imipenem and 500 mg of cilastatin as cilastatin sodium. Also contains sodium bicarbonate. Contains 1.6 mmol of sodium. ¹

This is a carbapenem (beta-lactam antibiotic). If the patient has a history of hypersensitivity to penicillins **and** cephalosporins, or carbapenems, check with the treating team that allergy status has been considered.

pH	6.5–8.5 when reconstituted ¹
PREPARATION	<p>A two-step process is required because imipenem is poorly soluble. To prepare a dose of 500 mg (of imipenem): use 2 syringes to withdraw 10 mL each from a 100 mL bag of a compatible fluid. Use the first syringe of 10 mL to reconstitute the vial. Shake well, it is a suspension (not a solution). Immediately withdraw the contents of the vial and transfer to the remaining fluid in the 100 mL infusion bag. Use the second syringe of 10 mL to rinse the vial. Shake well and immediately withdraw and transfer the contents to the infusion bag. Shake the bag well until a clear solution is formed.¹</p> <p>The final concentration is approximately 5 mg/mL (of imipenem).²</p> <p>For doses of more than 500 mg (of imipenem) use a larger volume bag of infusion fluid (e.g. 1 g (of imipenem) in 250 mL) and repeat the two-step process to prepare each vial of imipenem-cilastatin.</p> <p>Concentrations of 2.5–5 mg/mL (of imipenem) have been used.³</p> <p>Powder volume is not required. The product information provides advice for doses less than 500 mg (of imipenem).⁴ It is not recommended to take a part-dose from a suspension.</p> <p>The solution is colourless to yellow.¹</p>
STABILITY	<p>Vial: store below 25 °C.¹</p> <p>Reconstituted suspension: dilute immediately.¹</p> <p>Infusion solution: use immediately. Stable for 4 hours below 25 °C or for 24 hours at 2 to 8 °C.^{1,3}</p>
ADMINISTRATION	
IM injection	Not recommended ¹
SUBCUT injection	Not recommended
IV injection	Not recommended
IV infusion	See PREPARATION. For doses up to 500 mg (of imipenem) infuse over 20 to 30 minutes. For doses up to 1 g (of imipenem) infuse over 40 to 60 minutes. ¹
IV use for infants and children	See PREPARATION. Dilute the dose to a concentration of 5 mg/mL (of imipenem). Infuse doses up to 500 mg (of imipenem) over 20 to 30 minutes and doses up to 1 g (of imipenem) over 40 to 60 minutes. ^{5,6}
COMPATIBILITY	
Fluids	Sodium chloride 0.9% ¹ , glucose 5% ¹ , glucose in sodium chloride solutions ¹ , Plasma-Lyte 148 via Y-site ⁷
Y-site	Aciclovir ³ , amifostine ³ , anidulafungin ³ , caspofungin ³ , defibrotide ³ , foscarnet ³ , granisetron ³ , isavuconazole ³ , linezolid ³ , meropenem ³ , remifentanyl ³ , tigecycline ³ , zidovudine ³

INCOMPATIBILITY

Fluids Hartmann's^{1,3}, mannitol 15%⁸

Drugs Amiodarone³, amoxicillin³, azathioprine⁸, azithromycin³, ceftriaxone⁸, daptomycin⁸, ganciclovir⁸, haloperidol lactate⁸, lorazepam³, mannitol 15%⁸, metaraminol⁸, midazolam³, milrinone³, mycophenolate mofetil⁸, nicardipine⁸, palonosetron⁸, pethidine³, pyridoxine⁸, sodium bicarbonate³, thiamine⁸, vecuronium⁸

SPECIAL NOTES Slow the rate of infusion if the patient develops nausea or vomiting.¹

REFERENCES

1. Product information. Available from www.tga.gov.au. Accessed 14/11/2023.
2. Primaxin IV 500mg/500mg powder for infusion solution. Summary of product characteristics. London: Merck Sharp & Dohme (UK). Approved 30/06/1998. Updated 29/01/2021. Available from www.medicines.org.uk. Accessed 14/11/2023.
3. ASHP Injectable drug information 2021. Bethesda, MD: American Society of Health-System Pharmacists; 2021.
4. Medical information. Request AUU22-01926. [email]. Macquarie Park, NSW: Merck Sharp & Dohme Australia; 26/09/2022.
5. Paediatric Formulary Committee. BNF for children. London: BMJ group and Pharmaceutical Press; 2022–2023.
6. Phelps SJ, Hagemann TM, Lee KR, Thompson AJ. Pediatric injectable drugs. The teddy bear book. 11th ed. Bethesda, MD: American Society of Health-System Pharmacists; 2018.
7. Medical information. Plasma-Lyte 148 compatibility summary. Toongabbie, NSW: Baxter; March 2022.
8. Imipenem/cilastatin sodium. In: IV Index [internet]. Trissel's 2 clinical pharmaceuticals database (parenteral compatibility). Ann Arbor, MI: Merative. Accessed 14/11/2023.

VERSION

9.1