Imipenem belongs to the carbapenem class of antibiotics, acting through the inhibition of bacterial cell-wall synthesis by binding to penicillin-binding proteins. It is co-administered IV with cilastatin, a renal dehydropeptidase inhibitor that reduces the renal metabolism of imipenem. Imipenem has better Gram-positive activity coverage than meropenem. Carbapenems have one of the broadest antibacterial spectra and should not be used to treat infections if a narrower spectrum antibiotic with a lower impact on antibacterial resistance is an option.

**MAIN INDICATIONS**

May be used for the treatment of the following healthcare-associated infections:
- Sepsis
- Lower respiratory tract
- Urinary tract
- Skin and skin structure infections
- Intra-abdominal
- Bone and joint
- Endocarditis

**ADULT DOSE**

- **Usual Dose**: 500 mg q6h for most indications.
- **Reduced dose**: 250 mg q6h for uncomplicated UTI.

**SIDE EFFECTS**

- Phlebitis (2-5%)
- Eosinophilia (4%)
- Transient increase in blood urea nitrogen (BUN) or serum creatinine (<2%)
- Seizures (1.5%; significantly increases in patients with predisposing CNS factors)
- Nausea, diarrhoea, vomiting (1-2%)

**PREGNANCY**

Use with caution in CNS disorders (e.g., history of seizures); adjust dosage in renal impairment to avoid risk of seizures.

**EXCRETION**

Approximately 70% excreted in urine unchanged.