

**Colistin Dosing Protocol**  
Infectious Diseases Section, VA Greater Los Angeles  
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**Background**

Colistimethate (colistin methanesulfonate-*Coly-Mycin M*) is a multicomponent polypeptide antibiotic, mainly used for treatment of multidrug resistant Gram negative bacteria, including *Pseudomonas aeruginosa* and *Acinetobacter baumannii*. Colistin produces concentration dependent killing activity with moderate post antibiotic effect at high concentration.

Each vial containing colistimethate sodium = 150 milligrams of **colistin** base activity

**Dosing regimen**

Dose is given according to amount of **colistin** base and is based on

- Ideal body weight,
- Severity of infection,
- Renal function, as below:

Serum Creatinine

0.7-1.5 mg/dL

Colistin base dose

2.5-5 mg/kg/day IV in 2-4 divided doses, not to exceed 300mg/day

1.6-2.5 mg/dL

2.5 mg/kg/day IV in 1-2 divided doses

>2.5 mg/dL and HD

1 mg/kg IV q24h (given after HD when possible)

**Administration and Pharmacokinetics:**

- IV infusion can be given over 30 minutes (Lexi-Comp)
- IM administration is not recommended because of severe pain at injection site
- Half-life is 3-4.5 hours in patients with normal renal function

**Toxicity:**

- Nephrotoxicity:
  - Relatively common (~25% in patients with normal renal function)
  - Appears to be dose related
  - Azotemia tends to occur within the first 4 days and typically resolves within 2 weeks following discontinuation, though irreversible acute oliguric renal failure has been reported
- Neurotoxicity:
  - Much less common than nephrotoxicity
  - Can manifest as muscular weakness or polyneuropathy, paresthesias, ataxia, diplopia, ptosis and nystagmus
  - Typically reversible upon dose reduction or discontinuation

## References

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Landman D, Georgescu C, et al. Polymyxins revisited. *Clinical Microbiology Reviews*, July 2008: 449-465.

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Colistin Product Information