



BID Cephalexin Dosing in Cystitis

Cephalexin is a first-generation cephalosporin that is frequently used to treat urinary tract infections (UTIs). Cephalexin dosed at 250 mg – 500 mg every 6 hours is commonly cited for urinary tract infections.¹ However, the package insert notes that 500 mg every 12 hours may be used.² Can we cut the dosing frequency in half? Read on to explore the evidence supporting cephalexin 500 mg every 12 hours for cystitis.

Do cephalexin pharmacokinetics support every 12 hour dosing in cystitis?

Yes! Cephalexin is renally eliminated, with 90% being excreted unchanged in the urine.² A pharmacokinetic study found that after a single 500 mg dose of cephalexin, the urinary concentration of cephalexin was 2,400 mcg/mL within 3 hours.³ Additionally, by 12 hours, the concentration was 49 mcg/mL,³ which is still within a therapeutic range for susceptible isolates.

What are the clinical outcomes?

A recent study published in 2023 compared clinical outcomes between adult female outpatients treated for uncomplicated UTIs with cephalexin 500 mg twice daily and 500 mg four times daily for 5 – 7 days. Their primary outcome was treatment failure defined as continued symptoms, needing new therapy, or treatment of recurrent symptomatic UTI within 30 days. The authors found no difference in the primary outcome between the two groups (BID 12.7% vs QID 17%, P = 0.343).⁴

Key Takeaway: Pharmacokinetic and clinical outcomes data support cephalexin 500 mg BID in patients with acute uncomplicated cystitis. BID dosing may be preferred over QID dosing.

References

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