Cefaclor

**Antibiotic Class:**
Second-Generation Cephalosporin (true 2nd generation cephalosporin)

**Antimicrobial Spectrum:**
*Staphylococcus aureus* (methicillin susceptible), Coagulase negative Staphylococci, *Streptococcus pneumoniae* (penicillin susceptible), *Streptococcus spp. Haemophilus influenzae, Moraxella catarrhalis, Neisseria meningitides, Neisseria gonorrhoeae*

**Mechanism of Action:**
Cephalosporins exert bactericidal activity by interfering with bacterial cell wall synthesis and inhibiting cross-linking of the peptidoglycan. The cephalosporins are also thought to play a role in the activation of bacterial cell autolysins which may contribute to bacterial cell lysis.

**Pharmacodynamics:**
Cephalosporins exhibit time-dependent killing (T > MIC)

**Pharmacokinetics:**
Dose of 500mg: Cmax: 17.3 mcg/L; Tmax: 0.7 hours; Half-life: 0.6 hours; Table 10

**Adverse Effects:**
Hypersensitivity: Maculopapular rash, Urticaria, Pruritis, Anaphylaxis/angioedema, eosinophilia
Hematologic: Neutropenia, Leukopenia, Thrombocytopenia
GI: Diarrhea, *C. difficile* disease
Renal: Interstitial nephritis
Table 14

**Dosage:**
PO: 250mg, 500mg capsules
    Powder for Suspension: 125mg/5mL, 187mg/5mL, 250 mg/5mL, 375mg/5mL
    Chewable tablets: 125mg, 187mg, 250mg, 375mg
    Extended release tablets: 375mg, 500mg

Dosing in adults:
Acute exacerbation of chronic bronchitis: 500 mg extendedrelease tablets PO q12h x 7 days
Acute otitis media: 250mg to 500mg tablets PO q8h
Lower respiratory tract infection: 250mg to 500mg tablets PO q8h
Urinary tract infection: 250mg to 500mg tablets PO q8h

Dosing in pediatrics:
20-40mg/kg divided PO q8h

Disease state based dosing:
Renal failure: Caution with markedly impaired renal function; dose adjustment for moderate to severe renal impairment not usually recommended
Hepatic failure: No dosing changes recommended at this time.

**Contraindications/Warnings/Precautions:**
Precautions: Hypersensitivity to penicillins, renal impairment

**Drug Interactions:**
Live Typhoid Vaccine: decreased immunological response to the typhoid vaccine

**Pregnancy:**
Category B: No evidence of risk in humans but studies inadequate.

**Monitoring Requirements:**
Therapeutic: Culture and sensitivities, serum levels, signs and symptoms of infection, white blood cell count
Toxic: Urinalysis, BUN, SCr, AST and ALT, skin rash, Neutropenia and leukopenia, Prothrombin time in patients with renal or hepatic impairment or poor nutritional state, as well as patients receiving a protracted course of antimicrobial therapy, and patients previously stabilized on anticoagulant therapy.

**Brand names/Manufacturer:** Ceclor®/Eli Lilly; Ceclor CD®/Dura Pharmaceuticals; Cefaclor Extended Release®/Ivax Pharmaceuticals