Cefixime

**Antibiotic Class:**
Third-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*, *Enterobacteriaceae*, *E. coli*

**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 bacterical cell autolysins which may contribute to bacterial cell lysis.

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

**Pharmacokinetics:**
Dose of 400mg: Cmax: 3.6 mcg/L; Half-life: 3.1 hours; Tmax: 3.7 hours; Table 11

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

**Dosage:**
PO: 400mg tablets
Suspension: 100mg/5mL

Adult dosing: 400 mg PO once a day or divided twice a day
Gonorrhea: 400 mg PO as one-time dose

Disease state based dosing:
Renal failure: CrCl > 60 mL/min: standard dosing
  CrCl 21-60 mL/min: 75% of usual dose q24h
  CrCl < 20 mL/min: Half of usual dose q24h
Hepatic failure: No dosing changes recommended at this time.

**Contraindications/Warnings/Precautions:**
Precautions: hypersensitivity to penicillins, history of gastrointestinal disease, particularly colitis, 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:** Suprax®/Lederle