Levofloxacin:

Class: antibiotic.

Indications:

Treatment of community-acquired pneumonia, including multidrug resistant strains of *S. pneumoniae* (MDRSP); nosocomial pneumonia; chronic bronchitis (acute bacterial exacerbation); acute bacterial rhinosinusitis (ABRS); prostatitis (chronic bacterial), urinary tract infection (uncomplicated or complicated); acute pyelonephritis; skin or skin structure infections (uncomplicated or complicated); reduce incidence or disease progression of inhalational anthrax (postexposure); prophylaxis and treatment of plague (pneumonic and septicemic) due to *Y. pestis.*

Available dosage form in the hospital: 500MG IV VIAL, 500MG TAB.

Trade Names:

Dosage:

Acute bacterial rhinosinusitis: Oral, I.V.:

Manufacturer's recommendations: 750 mg every 24 hours for 5 days or 500 mg every 24 hours for 10-14 days

Alternate recommendations: 500 mg every 24 hours for 5-7 days (Chow, 2012)

Anthrax (inhalational): Oral, I.V.: 500 mg every 24 hours for 60 days, beginning as soon as possible after exposure

***Chlamydia trachomatis* sexually-transmitted infections (unlabeled use) (CDC, 2010):** Oral: 500 mg every 24 hours for 7 days

Chronic bronchitis (acute bacterial exacerbation): Oral: 500 mg every 24 hours for 7 days; Canadian labeling (not in U.S. labeling) also includes a dosage regimen of 750 mg every 24 hours for 5 days

Diverticulitis, peritonitis (unlabeled use) (Solomkin, [IDSA] 2010): Oral, I.V.: 750 mg every 24 hours for 7-10 days; use adjunctive metronidazole therapy

Epididymitis, nongonococcal (unlabeled use) (CDC, 2010): Oral: 500 mg once daily for 10 days

Gonococcal infection (unlabeled use) (CDC, 2010): As of April 2007, the CDC no longer recommends the use of fluoroquinolones for the treatment of uncomplicated or more serious gonococcal disease, unless no other options exist and susceptibility can be confirmed via culture.

Intra-abdominal infection, complicated, community-acquired (in combination with metronidazole) (unlabeled use) (Solomkin, [IDSA] 2010): I.V.: 750 mg once daily for 4-7 days (provided source controlled). **Note:** Avoid using in settings where *E. coli* susceptibility to fluoroquinolones is <90%.

Pelvic inflammatory disease (unlabeled use) (CDC, 2010): Oral: 500 mg once daily for 14 days with or without concomitant metronidazole; **Note:** The CDC recommends use as an alternative therapy only if standard parenteral cephalosporin therapy is not feasible and community prevalence of quinolone-resistant gonococcal organisms is low. Culture sensitivity must be confirmed.

Plague (prophylaxis and treatment): Oral, I.V.: 500 mg every 24 hours for 10-14 days, beginning as soon as possible after exposure. **Note:** Dose of 750 mg once daily may be considered if clinically warranted.

Pneumonia: Oral, I.V.:

Community-acquired (CAP): 500 mg every 24 hours for 7-14 days or 750 mg every 24 hours for 5 days (efficacy of 5-day regimen for MDRSP not established)

Healthcare-associated (HAP): 750 mg every 24 hours for 7-14 days

Prostatitis (chronic bacterial): Oral, I.V.: 500 mg every 24 hours for 28 days

Skin and skin structure infections: Oral, I.V.:

Uncomplicated: 500 mg every 24 hours for 7-10 days

Complicated: 750 mg every 24 hours for 7-14 days

Traveler's diarrhea (unlabeled use): Oral: 500 mg for one dose (Sanders, 2007)

Tuberculosis, drug-resistant tuberculosis, or intolerance to first-line agents (unlabeled use): Oral: 500-1000 mg every 24 hours (CDC, 2003)

Urethritis, nongonococcal (unlabeled use) (CDC, 2010): Oral: 500 mg every 24 hours for 7 days

Urinary tract infections: Oral, I.V.:

Uncomplicated: 250 mg once daily for 3 days

Complicated, including pyelonephritis: 250 mg once daily for 10 days **or** 750 mg once daily for 5 days

Dosing: Renal Impairment

I.V., Oral:

Normal renal function dosing of 750 mg daily:

Cl_{cr} 20-49 mL/minute: Administer 750 mg every 48 hours.

Cl_{cr} 10-19 mL/minute: Administer 750 mg initial dose, followed by 500 mg every 48 hours.

Hemodialysis/chronic ambulatory peritoneal dialysis (CAPD): Administer 750 mg initial dose, followed by 500 mg every 48 hours; supplemental doses are not required following either hemodialysis or CAPD.

Normal renal function dosing of 500 mg daily:

Cl_{cr} 20-49 mL/minute: Administer 500 mg initial dose, followed by 250 mg every 24 hours.

Cl_{cr} 10-19 mL/minute: Administer 500 mg initial dose, followed by 250 mg every 48 hours.

Hemodialysis/chronic ambulatory peritoneal dialysis (CAPD): Administer 500 mg initial dose, followed by 250 mg every 48 hours; supplemental doses are not required following either hemodialysis or CAPD

Normal renal function dosing of 250 mg daily:

Cl_{cr} 20-49 mL/minute: No dosage adjustment required.

Cl_{cr} 10-19 mL/minute: Administer 250 mg every 48 hours (except in uncomplicated UTI, where no dosage adjustment is required).

Hemodialysis/chronic ambulatory peritoneal dialysis (CAPD): No information available.

Continuous renal replacement therapy (CRRT) (Heintz, 2009; Trotman, 2005): Drug clearance is highly dependent on the method of renal replacement, filter type, and flow rate. Appropriate dosing requires close monitoring of pharmacologic response, signs of adverse reactions due to drug accumulation, as well as drug concentrations in relation to target trough (if appropriate). The following are general recommendations only (based on dialysate flow/ultrafiltration rates of 1-2 L/hour and minimal residual renal function) and should not supersede clinical judgment:

CVVH: Loading dose of 500-750 mg followed by 250 mg every 24 hours.

CVVHD: Loading dose of 500-750 mg followed by 250-500 mg every 24 hours.

CVVHDF: Loading dose of 500-750 mg followed by 250-750 mg every 24 hours.

Common side effect:

Cardiovascular: Chest pain , edema .

Central nervous system: Headache , insomnia , dizziness .

Dermatologic: Rash ,pruritus .

Gastrointestinal: Nausea , diarrhea , abdominal pain , dyspepsia , vomiting .

Local: Injection site reaction .

Pregnancy Risk Factor: C