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Comparison Table: Some Systemic Fluoroquinolones

For additional information on systemic fluoroquinolones, see Delafloxacin *(Baxdela)* – A New Fluoroquinolone Antibiotic

Comparison Table: Some Systemic Fluoroquinolones[1]

Drug	Some Available Formulations	Usual Adult Dosage[2]	Spectrum	Some Class Adverse Effects	Some Class Drug Interactions	Cost[3]
Ciprofloxacin – generic	**Oral:** 100, 250, 500, 750 mg tabs; 250 mg/5 mL, 500 mg/5 mL susp[4] **IV:** 200 mg/20 mL, 400 mg/40 mL vials	250-750 mg IV or PO q12h CrCl 30-50 mL/min: 250-500 mg q12h CrCl 5-29 mL/min: 250-500 mg q18h Hemodialysis or peritoneal dialysis: 250-500 mg q24h after dialysis **IV:** CrCl 5-29mL/min: 200-400 mg q18-24h	▸ Good aerobic gram-negative activity ▸ Considered most active fluoroquinolone against *Pseudomonas aeruginosa* ▸ Limited activity against aerobic gram-positive bacteria and anaerobes	▸ GI (anorexia, nausea, vomiting, diarrhea, abdominal discomfort) ▸ CNS toxicity ▸ Tendinitis and tendon rupture ▸ Peripheral neuropathy ▸ Hypoglycemia and hyperglycemia ▸ *Clostridium difficile* infection ▸ Transaminase elevations ▸ QT interval prolongation (except delafloxacin)[5] ▸ Phototoxicity (except delafloxacin)[5] ▸ Aortic dissection[11]	▸ Additive effects with QT interval prolonging drugs (not delafloxacin)[5] ▸ Drugs containing polyvalent cations, such as aluminum- or magnesium-containing antacids, sucralfate, iron, or zinc, can decrease absorption ▸ Increased risk of hypoglycemia with antidiabetic drugs ▸ Possible increased risk of seizures with NSAIDs ▸ Ciprofloxacin inhibits CYP1A2 and can increase serum concentrations of drugs metabolized by this pathway[6]	$2.40
Cipro (Bayer)	**Oral:** 250, 500 mg tabs; 250 mg/5 mL, 500 mg/5 mL oral susp[4]					49.00
extended-release – generic *Cipro XR*	500, 1000 mg ER tabs	1000 mg PO q24h CrCl <30 mL/min: 500 mg q24h Hemodialysis or peritoneal dialysis: 500 mg q24h after dialysis				44.60 49.60
Delafloxacin – *Baxdela* (Melinta)	**Oral:** 450 mg tabs **IV:** 300 mg single-use vials	450 mg PO q12h 300 mg IV q12h eGFR 15-29 mL/min/1.73 m^2: 200 mg IV q12h; no adjustment needed for oral formulation eGFR <15 mL/min/1.73 m^2 or hemodialysis: not recommended	▸ Better aerobic gram-positive activity than other fluoroquinolones[7-9] ▸ Good aerobic gram-negative activity, including fluoroquinolone-susceptible *Pseudomonas aeruginosa*[8] ▸ *In vitro* anaerobic coverage[8]			675.00
Levofloxacin – generic *Levaquin* (Janssen)	**Oral:** 250, 500, 750 mg tabs; 250 mg/10 mL soln **IV:** 25 mg/mL multi-dose vials	250-750 mg IV or PO q24h See footnote 10 for renal dosage adjustment	▸ Good aerobic gram-positive activity, including *Streptococcus pneumoniae* ▸ Good aerobic gram-negative activity, including fluoroquinolone-susceptible *Pseudomonas aeruginosa*			1.90 131.00
Moxifloxacin – generic *Avelox* (Bayer)	**Oral:** 400 mg tabs **IV:** 400 mg/250 mL soln for injection	400 mg IV or PO q24h	▸ Good aerobic gram-positive activity, including *Streptococcus pneumoniae* ▸ Less aerobic gram-negative activity than other fluoroquinolones ▸ Only fluoroquinolone with clinically demonstrated anaerobic coverage			51.00 152.20

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NSAIDs = nonsteroidal anti-inflammatory drugs

1. The FDA has warned that the risk of serious adverse effects, including tendinitis, peripheral neuropathy, and CNS effects, generally outweighs the benefit of fluoroquinolones for the treatment of acute sinusitis, acute exacerbations of chronic bronchitis, and uncomplicated urinary tract infections. For these infections, fluoroquinolones should be reserved for patients with no other treatment options. (Med Lett Drugs Ther 2016; 58:75).
2. Dosage may vary based on the site of infection, infecting organism, and patient specific characteristics, such as renal and hepatic function. Higher or lower doses than those listed may be needed.
3. Approximate WAC for 5 days' treatment with the oral tablet formulation at the lowest recommended adult dosage. WAC = wholesaler acquisition cost or manufacturer's published price to wholesalers; WAC represents a published catalogue or list price and may not represent an actual transactional price. Source: AnalySource® Monthly. March 5, 2018. Reprinted with permission by First Databank, Inc. All rights reserved. ©2018. www.fdbhealth.com/policies/drug-pricing-policy.
4. Oral suspension may not be equivalent on a mg/mg basis to tablets or capsules.
5. Delafloxacin does not appear to cause QTc prolongation or phototoxicity based on the data available to date. Of the fluoroquinolones, moxifloxacin is most likely to prolong the QT interval.
6. Inhibitors and inducers of CYP enzymes and P-glycoprotein. Med Lett Drugs Ther 2017 September 18 (epub). Available at: medicalletter.org/downloads/CYP_PGP_Tables.pdf. Accessed March 19, 2018.
7. M Bassetti et al. Expert Opin Investig Drugs 2015; 24:433.
8. JC Cho et al. Pharmacotherapy 2018; 38:108.
9. RK Flamm et al. Antimicrob Agents Chemother 2016; 60:6381.
10. If daily dosage for normal renal function is 750 mg: reduce to 750 mg q48h for CrCl 20-49 mL/min; to 750 mg once, then 500 mg q48h for CrCl 10-19 mL/min; to 750 mg once, then 500 mg q48h for dialysis. If daily dosage for normal renal function is 500 mg: reduce to 500 mg once, then 250 mg q24h for CrCl 20-49 mL/min; to 500 mg once, then 250 mg q48h for CrCl 10-19 mL/min; to 500 mg once, then 250 mg q48h for dialysis. If daily dosage for normal renal function is 250 mg: reduce to 250 mg q48h for CrCl 10-19 mL/min.
11. Fluoroquinolones should not be prescribed for patients who have an aortic aneurysm or are at risk for an aortic aneurysm, including patients with peripheral atherosclerotic vascular diseases, hypertension, certain genetic conditions such as Marfan syndrome and Ehlers-Danlos syndrome, and elderly patients.