



## Bugs and Drugs for All: Fluoroquinolone Facts

Have you taken ciprofloxacin for an infection? Or given a patient levofloxacin? Fluoroquinolones are some of the most commonly prescribed antibiotics. Review these pearls to ensure you are using them safely and effectively.



### Fluoroquinolone Antibiotics

Oral and intravenous (IV) fluoroquinolones (FQ) include ciprofloxacin (Cipro<sup>®</sup>), levofloxacin (Levaquin<sup>®</sup>), moxifloxacin (Avelox<sup>®</sup>), and delafloxacin (Baxdela<sup>®</sup>).



### Indication

FQ [treat a variety of resistant infections](#) from both gram-positive and gram-negative bacteria (specifically *Pseudomonas aeruginosa*). They can be used to treat infections in the urine, lungs, bones, skin, and abdomen and prevent infection in patients with cancer.



### Formulation

When given by mouth, FQ are well absorbed, and reach levels similar to those seen with the IV route. Therefore, the oral route is preferred to minimize complications associated with IV lines.



### Administration

Oral absorption of FQ is reduced when given with medications or feeds containing calcium, magnesium, iron, or zinc. Avoid taking with multivitamins or enteral feeds. A [recent study](#) found that over-half of FQ given inpatient were administered with an interacting substance.



### Side Effects

Safety concerns exist with FQ as they can cause [severe side effects](#). FQ should be used with caution for the shortest duration possible. Rare, but severe side effects include tendon rupture, neurological effects, aortic dissection, hypoglycemia, joint damage, and cardiac effects. Patients and families should be educated on risks with FQ.



### Place in Therapy

Because of safety concerns and potential increasing antibiotic resistance, use of FQ should be preserved to treat infections with no other antibiotic options available. This often includes treatment of multi-drug resistant bacteria.

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