

LEVOFLOXACIN

3rd generation fluoroquinolone that inhibits bacterial DNA synthesis.

ANTIMICROBIAL SPECTRUM

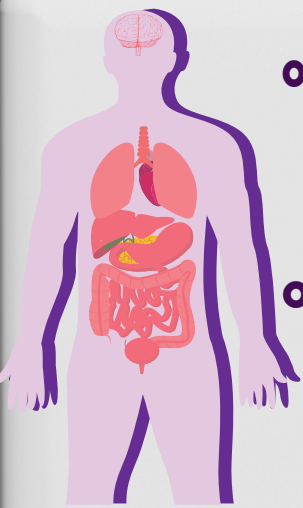
- **Gram-positive:** *Staphylococcus aureus*, *Streptococcus pneumoniae*, other streptococci, *Enterococcus faecalis*, *Bacillus anthracis*.
- **Gram-negative bacilli:** *Enterobacterales*, *Haemophilus influenzae*, *Acinetobacter sp.* (high level of resistance in many settings), *Campylobacter sp.*, *Vibrio sp.*, *Yersinia sp.*
- **Gram-negative cocci:** *Moraxella catarrhalis*, *Neisseria sp.* (high level of resistance in *Neisseria gonorrhoeae*).
- **Intra-cellular bacteria:**
 - *Legionella pneumophila* (alternative to macrolides).
 - *Chlamydomphila sp.*, *Mycoplasma pneumoniae*, *rickettsiosis*, *Coxiella burnetti* (alternative).
 - *Mycobacterium tuberculosis* (including multidrug-resistant isolates).



EXCRETION

Urine, 80% (unchanged).

MAIN INDICATIONS



- **Urinary tract infections**
 - Empirical treatment of pyelonephritis or prostatitis if no risk factor for resistance.
 - Targeted treatment for drug-susceptible pathogens.
- **Digestive tract infections**
 - Empirical treatment of traveller's diarrhoea with fever or abdominal pain (alternative to azithromycin).
 - Targeted treatment of drug-susceptible pathogens (*Salmonella*, *Campylobacter sp.*).
- **Osteo-articular infections**
 - Rifampicin-fluoroquinolone combination = 1st-line treatment for prosthetic joint infections due to susceptible staphylococci.
- **Pneumonia:** community-acquired and nosocomial
- **Inhalation anthrax:** post-exposure prophylaxis
- **Plague**
- **Multidrug-resistant tuberculosis**

ADULT DOSE

Oral or intravenous: 500-1,000 mg once daily.

One of the main assets of fluoroquinolones is good bio-availability (>95% for levofloxacin), and high diffusion in most tissues, including central nervous system, bone and joints, prostate.

Dosing in patients with renal failure

- Creatinine clearance 10-50 mL/min: 250 mg every 24 h
- Creatinine clearance <10 mL/min: 250 mg every 48 h

SIDE EFFECTS

- ! Neurotoxicity, especially in elderly patients (delirium); seizures
- ! Cardiovascular toxicity and phototoxicity: see above
- ! Rheumatologic toxicity:
 - Avoid in children <15 years (cartilage toxicity during growth)
 - Inform patients about risk of tendinitis (especially elderly patients, and / or on corticosteroids)



CAUTIONS

Most bacteria have low barrier for fluoroquinolone resistance emergence: **only use if no better alternative available; not to be used** as empirical treatment if the patient took fluoroquinolone within the last six months.

MONITORING

Inform patients about the risks of:

- **Rheumatologic side effects:** Tendinitis, up to Achilles sheath ruptures => consultation in case of pain.
- **Cardiovascular side effects:** rare (< 30/100,000 prescriptions) but potentially lethal (aortic dissection) => emergency consultation in case of thoracic pain.
- **Photosensitivity** (avoid heavy sun exposure).

PREGNANCY

FDA Category

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Should be given only if the potential benefits outweigh the potential risk to the foetus

Legal Disclaimer

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