

# fluoroquinolones

## adverse effects

- (i) photosensitivity
- (ii) central nervous system effects (dizziness and confusion) in older patients.
- (iii) damage the joints of immature animals and therefore should be used with caution in children under 14 years of age and pregnant or breastfeeding women.

- Ciprofloxacin and norfloxacin should be used in lower doses in patients with impaired renal function. The quinolones have a number of drug interactions.

## indications

- Quinolones should be reserved for treatment of infections resistant to cheaper drugs or where an oral drug with this particular antibacterial spectrum is essential. Resistance to these drugs has occurred, especially where they have been widely used, principally in infections caused by *Staphylococcus aureus*, *Pseudomonas aeruginosa*, enteric Gram-negative rods, *Campylobacter* species and *Neisseria gonorrhoeae*.

## differences between agents

- Ciprofloxacin, moxifloxacin, ofloxacin (eye drops only) and norfloxacin are analogues of nalidixic acid with broader antibacterial activity, increased bactericidal effect, improved oral absorption and longer half-lives.

- Norfloxacin is used to treat urinary and gastrointestinal infections.

- Moxifloxacin, an extended-spectrum fluoroquinolone, has increased activity against Gram-positive bacteria (including staphylococci and streptococci) and wide activity against Gram-negative aerobes, but is inferior to ciprofloxacin against *Pseudomonas*.

- It has good activity against anaerobes and most pathogens causing atypical pneumonia.

- It can be administered once daily.

- Ciprofloxacin, ofloxacin and norfloxacin have no useful activity against anaerobes, and ciprofloxacin and norfloxacin have poor activity against streptococci.

- Ciprofloxacin has a wide range of activity against Gram-negative bacteria including *Haemophilus influenzae*, enteric Gram-negative rods, *Pseudomonas aeruginosa*, Gram-negative cocci, some Gram-positive cocci and intracellular organisms including *Legionella* and various species of mycobacteria.