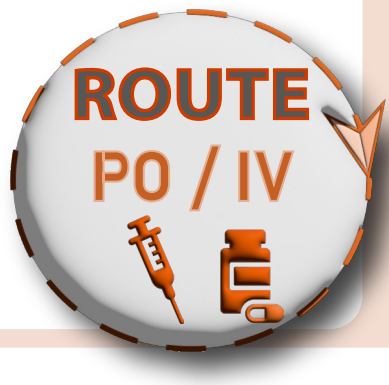
AZITHROMYCIN

As for all macrolides: inhibits RNA-dependent protein synthesis. It achieves higher concentrations in several body fluids or tissues than in plasma (up to 100 times in sputum and alveolar macrophages); has long intracellular half-life (40 to 68 hours) and slow release from tissue sites.

ANTIMICROBIAL SPECTRUM

- **Gram-positive bacteria:** erythromycin-susceptible *Streptococcus pneumoniae*, Group A, B, C and G streptococci and methicillin-susceptible *Staphylococcus aureus*.
- **Gram-negative bacteria:** *Haemophilus influenzae*, *Moraxella catarrhalis, Escherichia coli, Salmonella spp., Yersinia enterocolitica, Shigella spp., Campylobacter jejuni, Vibrio cholerae, Neisseria gonorrhoeae, H. pylori* and *Bordetella pertussis.*
- **Intra-cellular bacteria:** *Chlamydophila* spp., *Mycoplasma* spp., *Legionella pneumophila*, some *Rickettsia* spp.
- **Mycobacteria:** *Mycobacterium avium* complex, *Mycobacterium leprae*, other rapidly growing mycobacteria (may have clinically important inducible macrolide resistance gene).
- **No activity against anaerobes.**
- **Poor activity** against most Gram-negative rods, anaerobes, enterococci.



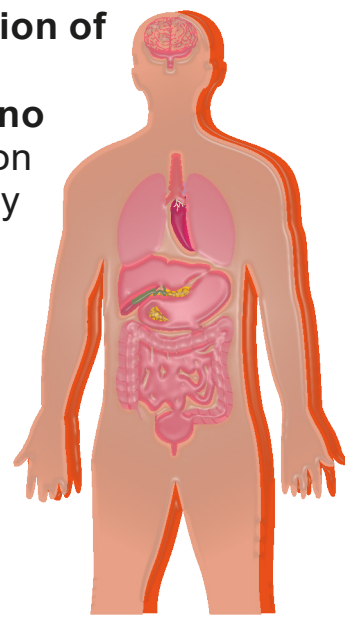
EXCRETION

- Azithromycin is mainly excreted in the bile and the faeces.
- No renal adjustment is needed.

MAIN INDICATIONS & DOSE

- **Group A *Streptococcus* pharyngitis (for patients with severe penicillin allergy):** 12 mg/kg PO (maximum: 500 mg) on day 1, followed by 6 mg/kg (maximum: 250 mg) once daily days 2 through 5 or 12 mg/kg (maximum: 500 mg) once daily for 3 days.
- **Secondary prophylaxis in patients with rheumatic fever (prevention of recurrent attacks):** 250 mg PO once daily.
- **Outpatient community-acquired pneumonia (CAP) with no comorbidities or risk of pneumococcal resistance:** 500 mg PO on day 1, followed by 250 mg once daily for 4 days or 500 mg once daily for 3 days.
- **Inpatient community-acquired pneumonia:** 500 mg PO/IV once daily for a minimum of 3 days, as part of an appropriate combination regimen.
- **Infectious diarrhoea in patients with fever or dysentery (bloody or mucoid diarrhoea) or patients with risk factors for fluoroquinolone resistance:** 1 g PO once or 500 mg q 24h x 3 days.
- **Sexually transmitted infections:**
  - **Urethritis and cervicitis, empiric therapy:** 1 g PO as a single dose.
  - **Uncomplicated gonococcal cervicitis, urethritis, or proctitis for patients with severe cephalosporin allergy:** 2 g PO as a single dose in combination with gentamicin IM.
  - **Chancroid (due to *Haemophilus ducreyi*):** 1 g PO as a single dose.
  - ***Chlamydia trachomatis* infection of the cervix, urethra, pharynx or partner therapy:** 1 g PO as a single dose.
  - **Granuloma inguinale (donovanosis):** 1 g PO once weekly or 500 mg once daily for ≥3 weeks and until lesions have healed.
  - ***Mycoplasma genitalium*:** (azithromycin resistance is rapidly emerging; consider alternative therapy). *Initial treatment:* 500 mg PO on day 1, followed by 250 mg once daily on days 2 through 5, or 1 g on day 1 followed by 500 mg once daily on days 2 through 4 with a test of cure 3 to 4 weeks after initiation.
- ***Bartonella henselae* (cat-scratch disease):** 500 mg PO on day 1, then 250 mg q day for 4 days.
- **Mycobacterial (nontuberculous) infection:**
  - ***M. avium* complex (MAC) infection.**
  - **Disseminated disease in patients with HIV:** 500 mg PO daily as part of a combination regimen.
  - **Secondary prophylaxis:** 500 PO mg daily as part of an appropriate combination regimen.
- **Pertussis:** 500 mg PO on day 1, followed by 250 mg once daily on days 2 to 5.
- **Chronic obstructive pulmonary disease, acute exacerbation:**
  - **Acute purulent exacerbation, treatment:** 500 mg PO on day 1, followed by 250 mg once daily on days 2 to 5 or 500 mg once daily for 3 days.

Note: Not a good choice in patients with risk factors for Pseudomonal infection or poor outcomes (e.g., ≥65 years of age with major comorbidities, severe heart failure)



SIDE EFFECTS

- ! Gastrointestinal: nausea, vomiting and diarrhoea
- ! Prolonged QT interval on ECG and polymorphic ventricular tachycardia; may be associated with increased risk of death
- ! Clostridioides difficile infection
- ! Hepatitis

MONITORING

Liver function tests, symptoms of hepatitis, complete blood cells with differential, audiogram in case of prolonged use, ECG for arrhythmia in case of known history of QTc prolongation and other risk.

PREGNANCY
FDA Category
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www.ISAC.world
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References can be found at www.APUA.org
Idea and Concept by Mushira Enani on behalf of APUA / ISAC

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