ERYthromycin ethylsuccinate (Oral) 2018

Newborn use only

Alert	Risk of infantile hypertrophic pyloric stenosis is significantly higher in neonates treated with erythromycin.[16]
Indication	1. Pertussis – post-exposure prophylaxis and treatment (azithromycin is recommended). 2. Chlamydial conjunctivitis and pneumonia 3. Treatment of other susceptible bacterial infections in penicillin-allergic infants 4. Prokinetic agent for gastrointestinal dysmotility (routine use not recommended)
Action	Inhibits protein synthesis by attaching to the 50S subunit of the bacterial ribosome in susceptible organisms. Motilin receptor agonist.
Drug Type	Macrolide antibiotic.
Trade Name	E-Mycin Syrup, EES Granules
Presentation	200 mg/5 mL suspension (granules for reconstitution), 100 mL 400 mg/5 mL suspension (granules for reconstitution), 100 mL
Dosage / Interval	Pertussis – post-exposure prophylaxis and treatment[1] **(azithromycin is recommended. Use erythromycin only if azithromycin is not available).** 10 mg/kg/dose PO 6-hourly for 5 to 14 days; 14 days preferred to avoid risk of relapse. *Chlamydia* infection (conjunctivitis, pneumonia) 12.5 mg/kg/dose PO 6-hourly for 14 days.[2] Non-chlamydial, susceptible bacterial infection in penicillin-allergic infants[3] Weight <1 kg: -Postnatal age ≤14 days: 10 mg/kg/dose 12-hourly -Postnatal age >14 days: 10 mg/kg/dose 8-hourly Weight ≥1 kg: -Postnatal age ≤7 days: 10 mg/kg/dose 12-hourly -Postnatal age >7 days: 10 mg/kg/dose 8-hourly Prokinetic dose for gastrointestinal dysmotility (inconsistent evidence for its efficacy and safety and routine use not recommended) Low-dose regimens: 2.5 mg/kg/dose 6-hourly up to 10 days.[10] or 5 mg/kg/dose 8-hourly (7–14 days)[11] High dose regimens: Doses up to 10–12.5 mg/kg/dose 6-hourly for 7–14 days have been used.[12-14] Post-op intestinal atresia: 3 mg/kg/dose 6-hourly[19]
Route	Oral
Preparation/Dilution	Add 77 mL of sterile water to granules in small volumes and shake vigorously until no lumps are visible. Suspension expires 10 days after reconstitution. Write expiry date on bottle.
Administration	Oral, preferably with feeds.[15] For prokinetic effect, often administered 30 minutes prior to feed.
Monitoring	Liver function.
Contraindications	Hypersensitivity to erythromycin or any component of the product. Concomitant therapy with pimozide, cisapride, ergotamine or dihydroergotamine, terfenadine, astemizole, lovastatin or simvastatin.
Precautions	Use with caution in hepatic impairment. QT interval prolongation. Uncorrected hypokalaemia, hypomagnesemia. Class 1A and Class 3 antiarrhythmic agents.
Drug Interactions	QT interval prolonging drugs: Cisapride, fluconazole, octreotide, cotrimoxazole, verapamil, Class 1A and Class 3 antiarrhythmic agents. Drugs that may increase toxicity of erythromycin: Ketoconazole. Drugs that may reduce erythromycin plasma concentration: Carbamazepine, theophylline.

	Erythromycin may increase plasma concentrations of following drugs: Carbamazepine, digoxin, theophylline, warfarin, midazolam.
Adverse Reactions	Infantile hypertrophic pyloric stenosis (IHPS): Risk of developing IHPS following erythromycin exposure is 0.4 % (95% CI 0.3–0.5%) in those receiving erythromycin at any time and 2.6 % (95% CI 1.5–4.2%) in those receiving erythromycin in the first 14 days.[16] COMMON: Nausea, vomiting and abdominal pain. The incidence of GI reactions may vary with the erythromycin salt preparation and/or dosing regimen. Diarrhoea may occur due to increased gastrointestinal motility caused by erythromycin. LESS FREQUENT OR RARE: Pancreatitis, pyloric stenosis, ileus, pseudomembranous colitis, sensorineural hearing loss, cholestasis, acute hepatitis, hepatic failure, agranulocytosis, thrombocytopenia, haemolytic anaemia, hypothermia, hypovolaemic shock and hypotension, leukocytoclastic vasculitis, acute respiratory distress following an allergic reaction, Schonlein-Henoch syndrome, candidal esophagitis, gingival hyperplasia, contact dermatitis, fixed drug eruptions, toxic pustuloderma, toxic epidermal necrolysis, interstitial nephritis, glomerulonephritis.
Compatibility	Not applicable
Incompatibility	Not applicable
Stability	After reconstituting granules, refrigerate and use within 10 days.
Storage	Store granules below 25°C. Reconstituted suspension should be refrigerated at 2–8°C and used within 10 days; do not freeze.
Special Comments	Readily absorbed. Hepatic metabolism by cytochrome P450 enzymes.
Evidence summary	Refer to full version.
References	Refer to full version.

Original version Date: 20/06/2018	**Author: NMF Consensus Group**
Current Version number: 1.0	**Current Version Date:** 20/06/2018
Risk Rating: Low	**Due for Review: 20/06/2023**
Approval by: JHCH CQ&PCC	**Approval Date: 24/07/2018**

Authors Contribution

Original author/s	Chris Wake, Srinivas Bolisetty
Revision author/s	
Expert review	Tony Lai, Brendan McMullan
Evidence Review	David Osborn
Nursing Review	Eszter Jozsa, Robyn Richards
Pharmacy Review	Jing Xiao, Carmen Burman, Cindy Chen
NMF Group contributors	Nilkant Phad, Himanshu Popat, Michael Hewson, Jessica Ryan, Joanne Patel, Roland Broadbent
Final content and editing review of the original	Ian Whyte
Electronic version	Cindy Chen, Ian Callander
Facilitator	Srinivas Bolisetty