Ocular Infections

INFECTION	MOST LIKELY ORGANIMS	THERAPY CATEGORY	ANTIMICROBIALS	COMMENTS
PERIORBITAL/ PRESEPTAL CELLULITIS • community-acquired	Staph *aureus* Strep *pyogenes* Strep *pneumoniae* H. *influenzae* M. *catarrhalis*	First line	**Mild, no systemic signs and evidence of skin portal of entry**: **Cephalexin 50 mg/kg/DAY PO DIVIDED q8h** (max. 2 g/**DAY**) **Otherwise (e.g. secondary to sinusitis):** **Amoxicillin-clavulanate 90 mg/kg/DAY PO DIVIDED q8h** (max. 3 g/**DAY**)* **OR** **if unable to take PO** **Ceftriaxone 50 mg/kg/dose IV q24h** (max. 2 g/dose)	*Other option: **Amoxicillin 45 mg/kg/DAY PO DIVIDED q8h** **+** **Amoxicillin-clavulanate 45 mg/kg/DAY PO DIVIDED q8h** (max. 3 g (amox)/**DAY**) •
			Moderate-severe, systemic signs and evidence of skin portal of entry or unable to take enteral: **Cefazolin 100 mg/kg/DAY IV DIVIDED q8h** (max. 1 g/dose) **Otherwise (e.g. secondary to sinusitis):** **Amoxicillin-clavulanate 25 mg/kg/dose IV q8h** (max. 1000 mg/dose) **OR** **Ceftriaxone 50 mg/kg/dose IV q24h** (max. 2 g/dose)	
		Penicillin allergy	**Mild, no systemic signs and evidence of skin portal of entry**: **Cefuroxime axetil 15 mg/kg/dose PO q12h** (max. 500 mg/dose) **Moderate-severe, systemic**	

			signs and evidence of skin portal of entry: **Cefazolin 100 mg/kg/DAY IV DIVIDED q8h** (max. 1 g/dose) **Otherwise (e.g. secondary to sinusitis):** **Ceftriaxone 50 mg/kg/dose IV q24h** (max. 2 g/dose)	
ORBITAL CELLULITIS • without central nervous system involvement • community-acquired	Strep *pneumoniae* H. *influenzae* M. *catarrhalis* Staph *aureus* Strep *pyogenes*	First line	**Ceftriaxone 50 mg/kg/dose IV q24h** (max. 2 g/dose) **If chronic sinusitis (symptoms for greater than 3 weeks and/or radiological evidence of chronicity), ADD:** **Metronidazole 10 mg/kg/dose IV/PO q8h** (max. 500 mg/dose IV and 750 mg/dose PO)	
		Penicillin allergy	same	
OPHTALMIA NEONATORUM • community-acquired • in the first 3 days of life if hospitalized in the NICU	*C. trachomatis* *N. gonorrhoeae* Staph *aureus* *Haemophilus spp.* Strep *pneumoniae*	First line	**Cefotaxime IV**: Lexicomp dosages **OR** **If normal bilirubin documented:** **Ceftriaxone 50 mg/kg/dose IV q24h** (max. 125 mg/dose)	If meningitis suspected or confirmed, use meningitis dosing
ENDOPHTALMITIS • post-surgical • post-injection	Acute: *Staph epidermidis* *Staph aureus* *Streptococcus* sp. *Enterococcus* Gram negative bacilli *Candida albicans* Chronic: *Cutibacterium acnes* *Staph epidermidis*	First line	**Acute:** **Vancomycin 1 mg intravitreal** **AND** **Ceftazidime 2.25 mg intravitreal** **OR** **Amikacin 0.4 mg intravitreal** **Chronic:** **Vancomycin 1 mg intravitreal** **If fungal etiology suspected:**	

	Fungal (*Candida* and molds)		**Liposomal Amphotericin B 3-5 mg/kg/DAY IV q24h** **AND** **Voriconazole 100 micrograms intravitreal**	
		Penicillin allergy	Same	

REFERENCES:

Empiric Antimicrobial Therapy Guide: Version 9, May 2025