Skin and Soft Tissue Infections

INFECTION	MOST LIKELY ORGANISMS	THERAPY CATEGORY	ANTIMICROBIALS	COMMENTS
CELLULITIS – MILD/MODERATE • for outpatient use • community-acquired	Group A strep Staph *aureus*	First line	**Cephalexin 50 mg/kg/DAY PO DIVIDED q8h** (max. 4.5 g/**DAY**) **OR** **If patient able to swallow pills:** **Cefadroxil 500 mg or 1000 mg PO q12h** (15 mg/kg/dose)	If mild purulent skin soft tissue infection, drainage may be sufficient.
		Penicillin allergy	**Cefuroxime axetil 15 mg/kg/dose PO q12h** (max. 500 mg/dose)	
CELLULITIS – SEVERE • requiring hospitalization • community-acquired	Group A strep Staph *aureus*	First line	**Inpatient:** **Cefazolin 50-100 mg/kg/DAY IV DIVIDED q8h** (max. 2 g/dose) **Ambulatory (via Pediatric Day Center) – ONLY IF unable to take/tolerate oral antibiotic and not meeting criteria for hospitalization**: **Ceftriaxone 50 mg/kg/dose IV q24h** (max. 2 g/dose)	
		Penicillin allergy	Same	
PURULENT SKIN AND SOFT TISSUE INFECTION • severe	Staph *aureus* (including MRSA) Group A strep	First line	**Inpatient:** **Cefazolin 50- 100 mg/kg/DAY IV DIVIDED q8h** (max. 2 g/dose) **If suspect MRSA, consider**	**ALWAYS** send pus for culture. If abscess present, drainage is recommended.

• community-acquired			**adding:** **Vancomycin* 15 mg/kg/dose IV q6h** **Ambulatory (via Pediatric Day Center)**: **If suspect MRSA:** **Daptomycin 4-10 mg/kg/dose IV q24h depending on age** (*refer to MCH formulary*)**	*Refer to the Guidelines for the prescription and the therapeutic drug monitoring of vancomycin at the Montreal Children's Hospital ** Baseline and weekly CK recommended.
		Penicillin allergy	Same	
NECROTIZING FASCIITIS • community-acquired	Monomicrobial: Group A strep Staph *aureus* (including MRSA) *Aeromonas hydrophila* (fresh water exposure) *Vibrio vulnificus* (sea water exposure) Polymicrobial (patients with underlying comorbidities, especially diabetes mellitus): mixed aerobes and anaerobes	First line	**Cefazolin 100 mg/kg/DAY IV DIVIDED q8h** (max. 2 g/dose) **AND** **Vancomycin * 15 mg/kg/dose IV q6h** **AND** **Clindamycin 40 mg/kg/DAY IV DIVIDED q8h** (max. 900 mg/dose) **If suspicion of polymicrobial or water-borne infection, replace cefazolin by:** **Piperacillin-tazobactam 60-75 mg/kg/dose IV q6h** (max. 16 g/**DAY**)	Surgical consult mandatory. IVIG should be considered as adjunctive therapy if patient is severely ill. *After having obtained nasal and throat (or perianal) swabs for MRSA screening. Refer to the Guidelines for the prescription and the therapeutic drug monitoring of vancomycin at the Montreal Children's Hospital
		Penicillin allergy	Same **If suspicion of polymicrobial or water-borne infection, replace piperacillin-tazobactam by:** **Meropenem 20 mg/kg/dose IV q8h** (max. 1 g/dose)	
ANIMAL/HUMAN BITE-	**Dog/cat**:	First line	**Amoxicillin-clavulanate**	Verify tetanus

RELATED WOUND INFECTION • mild and moderate (outpatient) • community-acquired	*Pasteurella* spp. Staph aureus *Capnocytophaga* spp. Strep*tococci* Oral anaerobes **Human**: Strep viridans Group A strep Staph aureus *Eikenella corrodens* Oral anaerobes		**45-60 mg/kg/DAY PO DIVIDED q8h** (max. 1500 mg/**DAY**)	immunization status. Assess whether rabies post-exposure prophylaxis is warranted.
		Penicillin allergy	**Animal bite:** **Trimethoprim-sulfamethoxazole 8-12 mg trimethoprim/kg/DAY PO DIVIDED q12h** (max. 160 mg trimethoprim/dose) **AND** **Clindamycin 30-40mg/kg/DAY PO DIVIDED q8h** (max. 600 mg/dose) **Human bite:** **Clindamycin 30-40mg/kg/DAY PO DIVIDED q8h** (max. 600 mg/dose) **AND** **If more than 8 years old:** **Doxycycline** 20 to 25 kg : 25-50 mg PO BID 25 to 40 kg : 50-75 mg PO BID More than 40 kg : 100 mg BID	
ANIMAL/HUMAN BITE-RELATED WOUND INFECTION • severe (requiring hospitalization) • community-acquired	**Dog/cat**: *Pasteurella* spp. Staph *aureus* *Capnocytophaga* spp. *Streptococci* Oral anaerobes spp. **Human** : Strep viridans Group A strep Staph aureus	First line	**Amoxicillin-clavulanate 25 mg/kg/dose IV q8h** (max. 1000 mg/dose)	Verify tetanus immunization status. Assess whether rabies post-exposure prophylaxis is warranted.
		Penicillin allergy	**Ceftriaxone 50 mg/kg/dose IV q24h** (max. 2 g/dose) **AND** **Metronidazole 10 mg/kg/dose PO q8h** (max. 750 mg/dose)	

	Eikenella corrodens Oral anaerobes			
SURGICAL SITE INFECTION head, neck, trunk, extremity wound	Group A strep Staph *aureus* *Clostridium* spp.	First line	**Cefazolin 50 mg/kg/DAY IV DIVIDED q8h** (max. 2 g/dose) **If suspect MRSA, replace by or add if severe:** **Vancomycin* 15 mg/kg/dose IV q6h**	Antibiotic therapy not recommended unless fever (more than 38.5), tachycardia or erythema extending beyond the wound margins for more than 5 cm. *Refer to the Guidelines for the prescription and the therapeutic drug monitoring of vancomycin at the Montreal Children's Hospital
		Penicillin allergy	Same	
SURGICAL SITE INFECTION GI tract, perineum, genital tract wound	Staph aureus *Streptococci* *Enterobacteriaceae* Anaerobes	First line	**Piperacillin-tazobactam 240-300 mg/kg/DAY IV DIVIDED q6-8h** (max. 4 g/dose)	
		Penicillin allergy	**Meropenem 20 mg/kg/dose IV q8h** (max. 1 g/dose)	
SUSPECTED ECZEMA HERPETICUM	HSV	First line	**Outpatient, 3 months and above:** **Valacyclovir PO 20 mg/kg/dose q12h** (max. 1000 mg/dose) **If component of bacterial superinfection, add:** **Cephalexin 50 mg/kg/DAY PO DIVIDED q8h** (max. 500 mg/dose) **Inpatient:** **Acyclovir 5 mg/kg/dose IV q8h** **If component of bacterial superinfection, add:**	Favor IV route if severe case.

			Cefazolin 50 mg/kg/DAY IV DIVIDED q8h (max. 2 g/dose)	
SUSPECTED ZOSTER (SHINGLES)	VZV	First line	**Outpatient, 3 months and above:** **Valacyclovir PO 20 mg/kg/dose q12h** (max. 1000 mg/dose) **Inpatient:** **Acyclovir 10 mg/kg/dose IV q8h**	Duration: 7 days
SUSPECTED VARICELLA	VZV	First line	**Outpatient, 3 months and above:** **Valacyclovir PO 20 mg/kg/dose q12h** (max. 1000 mg/dose) **Inpatient:** **Acyclovir 10-15 mg/kg/dose IV q8h**	Treatment only recommended in children at risk of developing complications (e.g. immuno-compromised, unimmunized older than 12 years, chronic pulmonary or cutaneous disorder, chronic salicylate therapy)

REFERENCES:

Empiric Antimicrobial Therapy Guide: Version 9, May 2025