

## Guidelines for Treatment of Skin and Soft Tissue Infections

These guidelines are not intended to replace clinical judgment. The antimicrobials are not listed in order of preference, and therapeutic decisions should be based on a number of factors including patient history, comorbidities, suspected etiology, antimicrobial susceptibility patterns, and cost. In certain populations (e.g., intravenous drug abusers, immunosuppressed, travelers), the suspected organisms may include a broader range of organisms. The Infectious Diseases consult services are available for complex patient consultations. Cultures may be obtained as deemed necessary if I & D is performed and/or if there is a discrete collection of pus or drainage that would allow an appropriate culture specimen to be obtained.

**Note:** Refer to table on page 4 for pediatric dosing.

Type of Infection	Suspected Organisms	Recommended Treatment
Folliculitis	<i>S. aureus</i> , <i>P. aeruginosa</i> (hot tub)	- Warm compress - No antibiotics
Furuncles, carbuncles, "boils"	<i>S. aureus</i> , including CA-MRSA	- I & D - If fever and/or significant surrounding cellulitis: TMP/SMX DS 1 tab* PO bid OR Minocycline 100 mg PO bid** OR Doxycycline 100 mg PO bid** OR Clindamycin 300 mg PO tid***
Abscesses	<i>S. aureus</i> , including CA-MRSA	- Mild I & D - If surrounding cellulitis, systemic symptoms, and/or multiple lesions: TMP/SMX DS 1 tab* PO bid OR Minocycline 100 mg PO bid** OR Doxycycline 100 mg PO bid** OR Clindamycin 300 mg PO tid*** - If gangrene, immunocompromised, extensive surrounding cellulitis, and/or severe systemic symptoms: Consider more extensive surgical treatment Vancomycin 10-15 mg/kg IV q12h <sup>§</sup> Consult pharmacy for patient-specific dosing.
Impetigo	<i>S. aureus</i> , including CA-MRSA, <i>S. pyogenes</i>	- Warm water soak - [Cephalexin 250 mg PO qid <b>PLUS</b> TMP/SMX DS 1 tab* PO bid] OR Minocycline 100 mg PO bid** OR Doxycycline 100 mg PO bid** OR Clindamycin 300 mg PO tid*** OR Mupirocin ointment TID x 7d
Erysipelas	<i>S. pyogenes</i> , rarely <i>S. aureus</i> , including CA-MRSA, or <i>S. agalactiae</i>	- PCN VK 250-500 mg PO qid OR Procaine PCN G 600,000 U IM bid OR Aqueous PCN G 0.6-2 MU IV q6h OR Clindamycin 300 mg PO/600 mg IV tid*** - May consider adding to PCN (to cover MRSA): TMP/SMX DS 1 tab* PO bid

**Guidelines for Treatment of Skin and Soft Tissue Infections – continued**

Cellulitis	<p><i>S. aureus</i>, including CA-MRSA, <i>S. pyogenes</i></p> <p>Diabetics: mixed aerobic and anaerobic flora. Consider Gram-negative organisms in immunocompromised patients or refractory patients. Consider anaerobes and fungi in IVDU.</p>	<ul style="list-style-type: none"> <li>- Mild [Cephalexin 250-500mg PO qid <b>PLUS</b> TMP/SMX DS 1 tab PO bid*] OR Minocycline 100 mg PO bid** OR Doxycycline 100 mg PO bid** OR Clindamycin 300 mg PO tid***</li> <li>- Moderate-severe Vancomycin 10-15 mg/kg IV q12h<sup>§</sup> Consult pharmacy for patient-specific dosing.</li> <li>- If culture documented streptococcal infection: PCN VK 500 mg PO qid OR Procaine PCN G 600,000 U IM bid OR Aqueous PCN G 1-2 MU IV q4-6h</li> <li>- Mild Amoxicillin/clavulanate 875/125 mg PO bid OR [Ciprofloxacin 500 mg PO bid OR moxifloxacin 400 mg PO qday <b>PLUS</b> clindamycin 300 mg PO tid***]</li> <li>- Moderate-severe<sup>†</sup> Ampicillin/sulbactam 1.5-3 g IV q6h OR Meropenem 500 mg IV q8h OR Piperacillin/tazobactam 3.375g IV q8h, infused over 4 hours <b>PCN allergy:</b> Consider ciprofloxacin/clindamycin or aztreonam/clindamycin.</li> </ul>
Necrotizing fasciitis	<p>Type I – mixed aerobic and anaerobic flora<sup>‡</sup></p> <p>Type II – <i>S. pyogenes</i></p>	<ul style="list-style-type: none"> <li>- Immediate surgical debridement</li> <li>- Ampicillin/sulbactam 1.5-3 g IV q6h OR Piperacillin/tazobactam 3.375g IV q8h, infused over 4 hours OR Meropenem 500 mg IV q6h <b>PCN allergy:</b> Consider ciprofloxacin/clindamycin or aztreonam/clindamycin.</li> <li>- Aqueous PCN G 2-4 MU IV q4-6h <b>PLUS</b> clindamycin 600 mg IV q8h</li> </ul>
Clostridial myonecrosis (gas gangrene)	<p><i>C. perfringens</i>, rarely <i>C. septicum</i></p>	<ul style="list-style-type: none"> <li>- Immediate surgical debridement</li> <li>- Aqueous PCN G 2-4 MU IV q4-6h <b>PLUS</b> clindamycin 600 mg IV q8h</li> </ul>

**Guidelines for Treatment of Skin and Soft Tissue Infections – continued**

<p>Bite wounds</p>	<p>Human: <i>S. viridans</i>, <i>S. aureus</i>, <i>Haemophilus</i> spp., <i>Eikenella corrodens</i>, <i>Peptostreptococcus</i>, <i>Fusobacterium</i>, <i>Porphyromonas</i>, <i>Prevotella</i></p> <p>Dog/cat: <i>Pasteurella multocida</i>, streptococci, staphylococci, <i>Fusobacterium</i>, <i>Bacteroides</i>, <i>Porphyromonas</i>, <i>Prevotella</i> Consider <i>Capnocytophaga canimorsus</i> in splenectomized dog bite patients.</p>	<ul style="list-style-type: none"> <li>- Wound irrigation</li> <li>- Amoxicillin/clavulanate 875/125 mg PO bid OR Doxycycline 100 mg PO bid** OR TMP/SMX 1 DS PO bid* OR [Clindamycin 300 mg PO tid <b>PLUS</b> ciprofloxacin 500mg PO bid] OR [Clindamycin 600mg IV q8h <b>PLUS</b> ciprofloxacin 400mg IV q12h] OR Ampicillin/sulbactam 1.5g IV q6h</li> <li>- Prophylaxis for 3-5 days is recommended for non-infected wounds:             <ul style="list-style-type: none"> <li>Amoxicillin/clavulanate 875/125 mg PO bid OR [Clindamycin 300 mg PO tid <b>PLUS</b> ciprofloxacin 500 mg PO bid] OR TMP/SMX DS 1 tab PO bid</li> </ul> </li> <li>- Consider tetanus booster.</li> <li>- Consider rabies vaccine.</li> <li>- Wound irrigation</li> <li>- Amoxicillin/clavulanate 875/125 mg PO bid OR             <ul style="list-style-type: none"> <li>For cats: Cefuroxime 500 mg PO bid OR Doxycycline 100 mg PO bid**</li> <li>For dogs: [Clindamycin 300 mg PO tid <b>PLUS</b> ciprofloxacin 500mg PO bid] OR [Clindamycin 300 mg PO tid <b>PLUS</b> TMP/SMX 1 DS PO bid*]</li> </ul> </li> <li>- Prophylaxis for non-infected wounds is not recommended.</li> </ul>
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CA-MRSA – community-associated methicillin-resistant *S. aureus*; I & D – incision and drainage; TMP/SMX – trimethoprim/sulfamethoxazole; PCN – penicillin

\*May consider using TMP/SMX DS 2 tabs PO bid for more severe infections. Monitor for increased adverse effects, such as hyperkalemia and GI upset. \*\*Should not be used in pregnant women or children under the age of 8 years.

\*\*\*If considering clindamycin, susceptibility to clindamycin should be confirmed with the “D test” for isolates resistant to erythromycin. Call the Microbiology Laboratory at 552-2090. §Alternatives to vancomycin include linezolid 600 mg PO/IV q12h OR daptomycin 4 mg/kg IV q24h. †Tigecycline 100 mg IV load, then 50 mg IV q12h\*\* may be considered as an alternative.



### Recommended Dosing for Pediatrics (excluding neonates)

Antimicrobial Agent	Recommended Dosing
Amoxicillin/clavulanate	Amoxicillin:clavulanate 14:1 – 45 mg/kg PO q12h 7:1 – 10-22.5 mg/kg PO q12h Range: 20-45 mg/kg/day 4:1 – 7-13.3 mg/kg PO q8h Range: 20-40 mg/kg/day divided q 8h Maximum daily dose: 2 g (amoxicillin component) **All doses represent the amoxicillin component
Ampicillin/sulbactam	25-100 mg/kg (ampicillin component) IV q6h Maximum daily dose: 8 g (ampicillin component)
Aqueous PCN G	25,000-100,000 U/kg IV q4-6h Range: 100,000-400,000 U/kg/day Maximum daily dose: 24 mU
Cefuroxime	10-15 mg/kg PO q8-12h Maximum daily dose: 1 g
Cephalexin	6.25-37.5 mg/kg PO q6h Maximum daily dose: 4 g
Ciprofloxacin	10-20 mg/kg PO q12h 10-15 mg/kg IV q8-12h Maximum daily dose: 800 mg
Clindamycin	2.5-10 mg/kg PO q6-8h Range: 10-30 mg/kg/day Maximum daily dose: 1.8 g 6.25-10 mg/kg IV q6-8h Range: 25-40 mg/kg/day Maximum daily dose: 4.8 g
Daptomycin	Safety not established in pediatrics.
Doxycycline	Not to be used in children under 8 years old. 1-4 mg/kg PO q12-24h Range: 2-4 mg/kg/day Maximum daily dose: 200 mg
Linezolid	10 mg/kg PO/IV q8-12h Maximum daily dose: 1.2 g
Meropenem	20 mg/kg IV q8h Maximum daily dose: 1.5 g
Minocycline	Not to be used in children under 8 years old. 2 mg/kg PO bid or 4 mg/kg PO qhs Maximum daily dose: 200 mg
Moxifloxacin	Safety not established in pediatrics.
PCN VK	6.25-16.7 mg/kg PO q6-8h Range: 25-50 mg/kg/day Maximum daily dose: 3 g
Piperacillin/tazobactam	50-133.3 mg/kg (piperacillin component) IV q8h Range: 150-400 mg/kg/day (piperacillin component) Maximum daily dose: 16 g (piperacillin component) <b>NOTE:</b> all doses must be infused over 4 hours, except in NICU patients
Tigecycline	Safety not established in pediatrics.
TMP/SMX	4-6 mg/kg (trimethoprim component) PO bid Maximum daily dose: 160 mg (trimethoprim component)
Vancomycin	10 mg/kg IV q6h Maximum daily dose: 4 g