

Pediatric Intravenous Antimicrobial Dosing Chart

The purpose of this chart is to assist in empiric dosing strategies for intravenous antimicrobials for patients ≥ 30 days through 18 years old. Individualization of dosing based on patient physiology and clinical condition is encouraged. For assistance with modifications due to organ dysfunction, please consult a pharmacist. For patients > 18 years of age, please consult an adult dosing reference.

Generic name	Age, if relevant	Dose	Interval	Maximum Daily Dose	Comments
Acyclovir	< 3 months	20 mg/kg	Q8h		
	≥ 3 months	10 mg/kg or 500 mg/m ²	Q8h	3000 mg	
Amikacin	Refer to Aminoglycoside Clinical Practice Guideline				
Amphotericin, conventional		0.5-1.5 mg/kg	Q24h		
Amphotericin, liposomal		3-7.5 mg/kg	Q24h		
Ampicillin ^a		50-100 mg/kg	Q6h	12000 mg	300-400 mg/kg/day for CNS infection (e.g, meningitis)
Ampicillin/sulbactam		50 mg/kg	Q6h	8000 mg	Based on ampicillin component; up to 300 mg/kg/day for severe infection (e.g., endocarditis)
Azithromycin		10 mg/kg, then 5-10 mg/kg	Q24h	500 mg	
Caspofungin		70 mg/m ² , then 50 mg/m ²	Q24h	70 mg	
Cefazolin		30 mg/kg	Q8h	6000 mg	150 mg/kg/day for serious infection (e.g., osteomyelitis)
Cefepime ^b		50 mg/kg	Q8-12h	6000 mg	Q8h for CNS infection, febrile neutropenia, bacteremia, or <i>Pseudomonas pneumonia</i>
Cefoxitin ^a		40 mg/kg	Q6h	12000 mg	
Ceftaroline	< 2 years	8 mg/kg	Q8h		
	≥ 2 years	12 mg/kg	Q8h	1800 mg	
Ceftazidime		50 mg/kg	Q8h	6000 mg	
Ceftazidime/avibactam		50 mg/kg	Q8h	6000 mg	Based on ceftazidime component
Ceftolozane/tazobactam		20 mg/kg	Q8h	3000 mg	Based on ceftolozane component; for pneumonia increase to 40 mg/kg/dose
Ceftriaxone		50 mg/kg	Q24h	2000 mg	Urinary tract infection or pyelonephritis, acute otitis media
		100 mg/kg	Q24h	2000 mg	Pneumonia, skin/soft tissue, intra-abdominal infection, osteomyelitis, bacteremia (except MSSA)
		50 mg/kg	Q12h	4000 mg	Meningitis, Enterococcal endocarditis, MSSA bacteremia
Ciprofloxacin		10 mg/kg	Q8h	1200 mg	Alternative: 15 mg/kg Q12h
Clindamycin		10 mg/kg	Q6h	2700 mg	Alternative: 13 mg/kg Q8h

Daptomycin		6-12 mg/kg	Q24h		Depends on age/indication, see Lexi for details
Ertapenem	< 12 years	15 mg/kg	Q12h	1000 mg	
	≥ 12 years	15 mg/kg	Q24h	1000 mg	
Fluconazole, prophylaxis		3 mg/kg	Q24h	400 mg	
Fluconazole, treatment		6-12 mg/kg	Q24h	800 mg	Consider higher doses for CNS, severe pulmonary or disseminated infection
Gentamicin	Refer to Aminoglycoside Clinical Practice Guideline				
Levofloxacin	< 5 years	10 mg/kg	Q12h		
	≥ 5 years	10 mg/kg	Q24h	750 mg	
Linezolid	< 12 years	10 mg/kg	Q8h	1800 mg	
	≥ 12 years	10 mg/kg	Q12h	1200 mg	
Meropenem ^b		20 mg/kg	Q8h	3000 mg	40 mg/kg/dose Q8h (max 6000 mg/day) for CNS infection
Metronidazole		10 mg/kg	Q6-8h	2000 mg	Q6h (max 4000 mg/day) for serious anaerobic infection
		30 mg/kg	Q24h	1500 mg	Once daily dosing for appendicitis
Micafungin, prophylaxis	< 4 months	2 mg/kg	Q24h		
	≥ 4 months	1 mg/kg	Q24h	50 mg	
Micafungin, treatment	< 4 months	10 mg/kg	Q24h		
	≥ 4 months	2-4 mg/kg	Q24h	150 mg	
Moxifloxacin		10 mg/kg	Q24h	400 mg	
Nafcillin ^a		50 mg/kg	Q6h	12000 mg	
Oxacillin ^a		50 mg/kg	Q6h	12000 mg	
Penicillin G		250-400,000 (units/kg/day)	Q4-6h	24 million units	Note dosing in units/kg/day
Piperacillin/tazobactam ^{b,c}		100 mg/kg	Q8h	16000 mg	Based on piperacillin component; max 3000 mg/dose for appendicitis
Rifampin		10-20 mg/kg/DAY	Q8-12h		Depends on indication; see Lexi for details
Trimethoprim (TMP)/sulfamethoxazole		6 mg/kg	Q12h		Based on TMP component; 20 mg TMP/kg/day divided q6-8h for <i>Pneumocystis</i> or other serious infection
Tobramycin	Refer to Aminoglycoside Clinical Practice Guideline				
Vancomycin	Refer to Vancomycin Clinical Practice Guideline				
Voriconazole	Refer to Antifungal Clinical Practice Guideline				

^a For maximum daily dose of 12,000 mg/day, recommended dosing regimen is 2000 mg q4h

^b Extended infusion preferred

^c 300 mg/kg/day (max 4000 mg/dose) divided q6h may be appropriate for adolescents not receiving extended infusion

References:

1. Bradley JS, Nelson JD, Barnett E, et al. *Nelson's Pediatric Antimicrobial Therapy*. 29th ed. American Academy of Pediatrics; 2023.
2. American Academy of Pediatrics (AAP). In: Kimberlin DW, Brady MT, Jackson MA, Long SA, eds. *Red Book: 2021 Report of the Committee on Infectious Diseases*. 32nd ed. Elk Grove Village, IL: American Academy of Pediatrics; 2021.
3. Gilbert DN, Chambers HF, Eliopoulos GM, et al., eds. *The Sanford Guide to Antimicrobial Therapy 2021*. 53rd ed. Sperryville, VA. 2023.

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