

Table III Dosages, dosing intervals, and routes of administration of antimicrobial agents, by categories, for children after the newborn period and adults

Note that dosages might require adjustment in patients with renal or liver dysfunction, or being treated with dialysis, hemofiltration, or extra-corporeal membrane oxygenation, or receiving interacting drugs.

The information is from the following sources:

Red Book. 2015 Report of the Committee on Infectious Diseases, American Academy of Pediatrics 2015.

Nelson's Pocket Book of Pediatric Antimicrobial Therapy, 2016. American Academy of Pediatrics 2016.

Gilbert DN, Chambers HF, Eliopoulos GM, Saag MS (eds): The Sanford Guide to Antimicrobial Therapy 2015. 45th edition, Antimicrobial Therapy, Inc.

Long SS, Pickering LK, Prober CG (eds): Principles and Practice of Pediatric Infectious Diseases. 4th edition. Elsevier Inc. 2012.

Fiore AE, Fry A, Shay et al: Antiviral agents for the treatment and chemoprophylaxis of influenza. Recommendations of the advisory committee on immunization practices. MMWR 2011; 60 (RR01):1-24.

Drug	Pediatric dosage mg/kg/24 hours	Adult dosage/24 hours	Interval	Route
Penicillins:				
Ampicillin	100-400	6-12 g	q 6 hours	iv, im
Ampicillin/sulbactam	200 mg	8 g	Q 6 hours	iv
Nafcillin	150-200	3-12 g	q 4-6 hours	iv, im
Oxacillin	100-200	4-12 g	q 4-6 hours	iv, im
Penicillin G	100,000-300,000 units/kg/24 hours	8 million-24 million units	q 4-6 hours	iv, im
Piperacillin	200-300	9-16 g	q 6-8 hours	iv
Piperacillin/tazobactam	240-300	12-18 g	q 8 hours	iv
Ticarcillin/clavulanate	200-300	12-18 g	q 4-6 hours	iv
Cephalosporins:				
Cefazolin	50-150	1.5-6 g	q 6-8 hours	iv, im
Cefepime	100-150	2-6 g	q 8 hours	iv, im
Cefotaxime	100-180	3-6 g	q 6-8 hours	iv, im
For meningitis	200-300	12 g	q 6 hours	iv
Cefotetan	60-100	2-4 g	q 12 hours	iv, im
Cefoxitin	80-100	4-6 g	q 6 hours	iv, im
Ceftaroline	<6 mon 24-30 >6 mon 36-45	1.2 g	q 8 -12 hours q 8 hours	iv
Ceftazidime	90-200	3-6 g	q 8 hours	iv
In cystic fibrosis patients	300		q 8 hours	iv
Ceftazidime/avibactam		6/1.5 g		

Ceftolozane/tazobactam		3/1.5 g	q 8 hours	iv
Ceftriaxone	50-100	2-4 g	q 12-24 hours	iv, im
Carbapenems:				
Doripenem	60	1.5 g	q 8 hours	iv
Ertapenem	30	1 g	q 12 hours	iv, im
Imipenem/cilastatin	60-100	1-2 g	q 6 hours	iv, im
Meropenem (non-meningitis)	60	3 g	q 8 hours	iv, im
Meropenem (meningitis)	120	6 g	q 8 hours	iv
Monobactam				
Aztreonam	90-120	8 g	Q 6-8 hours	iv
Aminoglycosides:				
Amikacin¹	15-22.5	15 mg	q 8-24 hours	iv, im
In cystic fibrosis	30-35			
Gentamicin¹	3-7.5	3-5 mg	q 8-24 hours	iv, im
In cystic fibrosis	10			
Streptomycin	20-30	1 g	q 12 hours	im
Tobramycin¹	3-7.5	3-5 mg	q 8 hours	iv, im
In cystic fibrosis	7-10			
Macrolides:				
Azithromycin po	5-12	500 mg	q 24 hours	po
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Azithromycin iv	10	500 mg	q 24 hours	iv
Erythromycin po	50	1-2 g	q 6-12 hours	po
Erythromycin iv (can cause dysrhythmias)	20	1-4 g	q 6 hours	iv
Fluoroquinolones:				
Ciprofloxacin po	20-40	0.5-1.5 g	q 12 hours	po
iv	20-30	1.2 g	q 12 hours	iv
Levofloxacin <5 years	20		q 12 hours	po, iv
Levofloxacin >5 years	10	500-750 mg	q 24 hours	po, iv
Moxifloxacin		0.4 g	q 24 hours	iv
Tetracyclines:				
Doxycycline	2-4	100-200 mg	q 12 hours	po, iv
Minocycline	4	200	q 12-24 hours	po
Tetracycline	25-50	1-2 g	q 6 hours	po
Tigecycline	2	Initial dose 100 mg, then 50 mg/dose	q 12 hours	iv
Miscellaneous:				
Chloramphenicol^{1, 2}	50-100	2-4 g/day	q 6 hours	iv, po
Clindamycin	20-40	0.9-2.7 g	q 6-8 hours	iv
	10-30	1.8	q 6-8 hours	po

Colistimethate (colistin)	2.5-5 (based on lean body weight)	As for children	q 8 hours	iv
Daptomycin				
2-6 years	2-5 years: 10; 6-11 years: 7; years:	>12 years: 4-6	q 24 hours	iv
>6 years	4-6	4-6 mg/kg	q 24 hours	iv
Linezolid				
< 12 years	30		q 8 hours	po, or iv
>12 years	20	1.2 g	q 12 hours	po, or iv
Metronidazole po	30-50	30 mg/kg	q 8 hours	po
iv	22.5-40	1-2 g	q 6-8 hours	iv
Quinupristine/dalfopristine	15-22.5	15-22.5 mg	q 8-12 hours	iv
Rifampin	10-20	600-900 mg	q 8-24 hours	po or iv
Sulfadiazine	120-150	2-4 g	q 6 hours	po
Trimethoprim/sulfamethoxazole	8-20 mg/kg/24 hours	5-20 mg/kg/24 hours	q 6-12 hours	po, iv
Vancomycin	40-60	2-4 g	q 6-12 hours	iv
For Clostridium difficile infection	40	500 mg	q 6 hours	po
Antifungals:				
Polyenes:				
Amphotericin B deoxycholate	1-1.5	1-1.5 mg/kg	q 24 hours	iv
Amphotericin B liposomal	3-5	3-5 mg/kg	q 24 hours	iv
Azoles:				
Fluconazole	3-12	100-800	q 24 hours	po, iv
Itraconazole	5-10	200-400	q 12 hours	po
Posaconazole suspension	<13 years: 18 mg/kg		q 8 hours	po
Posaconazole (children > 13 years)suspension	>13 years:	600-800 mg	q 24 hours	po
Posaconazole (Adults) delayed-release or iv		300 mg X 2, q 12 hr, then qd	q 12 hours	po
Voriconazole	2-12 years	>12 years		
iv (loading dose x 2 doses)	9 mg/kg/dose	6 mg/kg/dose	q 12 hours	iv
iv (maintenance)	8 mg/kg/dose	4 mg/kg/dose	q 12 hours	iv
Po (loading dose x 2 doses)	9 mg/kg/dose	<40 kg – 200	q 12 hours	po
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		mg/dose; >40 kg–400 mg/dose		
Po (maintenance)	<40 kg: 100 mg/dose;	>40kg 200-300 mg/dose	q 12 hours	po
Echinocandins:				
Anidulafungin				
Loading dose X 1	1.5-3	100-200 mg	q 24 hours	iv

Maintenance	0.75-1.5	50-100 mg	q 24 hours iv
Caspofungin			
Loading X 1	70 mg/m ²	70 mg	q 24 hours iv
Maintenance	50 mg/m ²	50 mg	q 24 hours iv
Micafungin	2-4 (the higher dosage if <8 years 10 for neonates)	50-150 mg	q 24 hours iv
Pyrimidine:			
Flucytosine¹	50-150	as for children	q 6 hours po
Antivirals:			
Acyclovir			
Encephalitis	<3 months: 60; 3m-12 yr: 30-45	>12years 30 mg/kg/dose	q 8 hours iv
Varicella or zoster (severe or in immunocompromised host)	30 mg/kg/24 hours, max. 1000 mg/dose		q 8 hours iv
Cidofovir	Variable dosage regimens according to indication; used with probenecid		
Foscarnet			
CMV infection	180		q 8 hours iv
HSV/VZV infections	80-120		q 8-12 hours iv
Ganciclovir	10-12 (initial therapy)		q 12 hours iv
Oseltamavir, treatment:			
Premature infant	1 mg/kg/dose		q 12 hours po
Infant <3 months	3 mg/kg/dose		q 12 hours po
<15 kg	30 mg/dose		q 12 hours po
15-23 kg	45 mg/dose		q 12 hours po
23-40 kg	60 mg/dose		q 12 hours po
>40 kg and adults	75 mg/dose		q 12 hours po
Zanamavir, inhalation, for >7 years	10 mg (2 x 5) mg		q 12 hours inhalation
Anti-parasitic drugs:			
Treatment of malaria: see www.cdc.gov/malaria/resources/pdf/treatmenttable.pdf for treatment guidelines, including dosages for different ages, and how to obtain emergency drugs.			
Artesunate	2.4 mg/kg/dose at times 0, 12, 24, and 48 hours. Add oral drug as soon as patient can		

	take: doxycycline, clindamycin or atovaquone/proguanil See references.		
Artemether-lumefantrine 20-120 mg	Doses at: Time 0; time 8 hours; time 20 hours, then q 12 hours for total of 6 doses	5-15 kg 1 tab 15-25 kg 2 tabs 25-35 kg 3 tabs >35 kg 4 tabs	
Atovaquone/proguanil Malaria treatment	Pediatric tab 62.5/25 mg Adult tab 250/100 mg	5-8 kg: 2 ped tab 9-10 kg: 3 ped tab 11-20 kg: 1 ad tab 21-30 kg: 2 ad tab 31-40 kg: 3 ad tab >40 kg: 4 ad tab	qd X 3 d
Chloroquine phosphate	10 mg base/kg 600	600 mg base:	time 0
10 mg base = 17 mg salt	5 mg base/kg	300 mg base:	times: 6, 24, 48 hours
Quinidine gluconate	6.25 mg base/kg (=10 mg salt/kg) loading dose iv over 1-2 hours, then 0.0125 mg base/kg/minute (=0.02 mg salt/kg/minute) by continuous infusion for at least 24 hours. Start oral therapy as soon thereafter as possible.		
Quinine sulfate	10 mg salt/kg/dose	650 mg salt	q 8 hours po X 3-7 days
8.2 mg base = 10 mg salt			
Pyrimethamine	2 mg/kg/daily x 2 days, then 1 mg/kg/day	200 mg X 1 day then 50-75 mg	q 24 hours po
Sulfadiazine	100-200 mg/kg/day	4-6 g/day	q 6 hours po

¹Monitor blood levels

²Chloramphenicol is rarely used in the USA, and although it is well absorbed enterally, the oral form is no longer available in the USA.

iv = intravenously; im = intramuscularly; po = orally; qd = daily; ped = pediatric; ad = adult