

Table 3: 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 . 2009 Report of the Committee on Infectious Diseases, American Academy of Pediatrics 2009.

Nelson's Pocket Book of Pediatric Antimicrobial Therapy, 2010-2011. American Academy of Pediatrics 2010.

Gilbert DN, Moellering RC, Eliopoulos GM, Chambers HF, Saag MS (eds): The Sanford Guide to Antimicrobial Therapy 2010. 40th edition, Antimicrobial Therapy, Inc.

Long SS, Pickering LK, Prober CG (eds): Principles and Practice of Pediatric Infectious Diseases. 3rd edition. 2008. Churchill Livingstone Elsevier, China.

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
Penicillin G	100,000-500,000 units/kg/24 hours	8 million-30 million units	q 4-6 hours	iv, im
Oxacillin	100-200	4-12 g	q 4-6 hours	iv, im
Nafcillin	150-200	3-6 g	q 4-6 hours	iv, im
Piperacillin	200-300	8-24 g	q 6-8 hours	iv
Piperacillin/tazobactam	240-300	12-18 g	q 8 hours	iv
Ticarillin/clavulanate	200-300	12-24 g	q 4-6 hours	iv
Cephalosporins:				
Cefazolin	50-100	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	200-225	12 g	q 6 hours	iv
Cefotetan	40-80	2-6 g	q 12 hours	iv, im
Cefoxitin	80-160	4-12 g	q 6 hours	iv, im
Ceftazidime	90-150	3-6 g	q 8 hours	iv
Ceftriaxone	50-100	2-4 g	q 12-24 hours	iv, im
Carbapenems:				
Ertapenem	30	1 g	q 12 hours	iv, im
Imipenem/cilastatin	60-100	1-4 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
Aminoglycosides:				
Amikacin*	15-22.5	15 mg	q 8-12 hours	iv, im
Gentamicin*	3-7.5	3-7.5 mg	q 8-14 hours	iv, im
Streptomycin	20-30	1 g	q 12 hours	im
Tobramycin*	3-7.5	3-5 mg	q 8 hours	iv, im
Cystic fibrosis	7-10			
Macrolides:				
Azithromycin po	5-15	500 mg	q 24 hours	po

Azithromycin iv	10	500 mg	q 24 hours	iv
Erythromycin po	30-50	1-2 g	q 6-12 hours	po
Erythromycin iv (can cause dysrhythmias)	15-50	1-4 g	q 6 hours	iv
Fluoroquinolones:				
Ciprofloxacin	20-40	0.5-1.5 g	q 12 hours	po, 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	200-400	q 12-24 hours	po
Tetracycline	25-50	1-2 g	q 6 hours	po
Tigecycline		Initial dose 100 mg, then 50 mg/dose	q 12 hours	iv
Miscellaneous:				
Chloramphenicol[^]*	50-100	1-4 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
Colistin	2.5-5 (based on lean body weight)	As for children	q 8 hours	iv
Daptomycin				
2-6 years	10		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	iv
Quinupristine/dalfopristine	15-22.5	15-22.5 mg	q 8-12 hours	iv
Metronidazole	15-40	30 mg/kg	q 6-8 hours	po, iv
Rifampin	10-20	600 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	2 g	q 6 hours	po
Antifungals:				
Polyenes:				
Amphotericin B deoxycholate	0.7-1.5	1-1.5 mg/kg	q 24 hours	iv
Amphotericin B liposomal	5	5 mg/kg	q 24 hours	iv
Azoles:				
Fluconazole	3-6 (up to 12 for severe infections)	100-800 mg	q 24 hours	po, iv
Posaconazole (children > 13 years)	800 mg/24 hours		q 6-12 hours	po
Posaconazole (Adults)		800 mg/24 hours	q 12 hours	po
Voriconazole				
iv (loading dose x 2 doses)	8 mg/kg/dose	6 mg/kg/dose	q 12 hours	iv
iv (maintenance)	7 mg/kg/dose	4 mg/kg/dose	q 12 hours	iv
Po (loading dose x 2 doses)	10 mg/kg/dose	< 40 kg – 200	q 12 hours	po

		mg/dose; > 40 kg – 400 mg/dose		
Po (maintenance)	7 mg/kg/dose	< 40 kg – 100 mg/dose; > 40 kg – 200 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	4-12 (the higher dosage if < 8 years)	50-150 mg	q 24 hours	iv
Pyrimidine:				
Flucytosine*	50-150	as for children	q 6 hours	po
*Monitor blood levels				
Antivirals:				
Acyclovir				
Encephalitis	Up to 60, maximum 1000 mg/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
Gancyclovir	10-15 (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 inhalations)		q 12 hours	inhalation
Antiparasitic drugs:				
Treatment of malaria: see www.cdc.gov 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			
Chloroquine	See references			
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 X 3-7 days	10 mg/kg/dose	650 mg/dose	q 8 hours	po X 3-7 days
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

*Monitor blood levels

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

iv = intravenously; im – intramuscularly; po = orally