

Table 27.3. Common antimicrobial drug dosage in horses.^a

Drug Preparation	Dose (mg/kg)	Dose interval (h)	Route of administration
Beta-lactams			
Benzyl penicillins:			
Penicillin G (Na, K)	25,000 IU/kg	6	IV
Penicillin G (procaine)	25,000 IU/kg	12	IM
Aminobenzyl penicillins:			
Ampicillin sodium	20	6–8	IV or IM
Ampicillin trihydrate	20	12	IM
		8	PO (foals only)
Amoxicillin trihydrate	30	8	PO (foals only)
Bacampicillin	25	12	PO
Pivampicillin	25	12	PO
Antistaphylococcal penicillins:			
Oxacillin	25	8–12	IM
	25	6	IV
Antipseudomonal penicillins:			
Ticarcillin	50	6	IV
Ticarcillin-clavulanic acid	50	6	IV
First-generation cephalosporins:			
Cefazolin	20	8	IM
	20	6–8	IV
Cephalothin	20	8	IM
	20–30	6	IV
Cephapirin	20	8	IM
	20–30	6	IV
Cephalexin	10	6	IV
	30	8	PO
Cephradine	25	6	IV
	25	6–8	PO (foals only)
Cefadroxil	20–40	8	PO (foals only)
Second-generation cephalosporins:			
Cefoxitin	20	6	IV or IM
Third-generation cephalosporins:			
Cefoperazone	30	6–8	IV or IM
Cefotaxime	40	6	IV
Ceftiofur sodium	2.2–4.4	24	IM
	5	12	IV or IM (foals)
Ceftiofur crystalline free acid	6.6	repeat in 4 days ^m IM	
Ceftriaxone	25	12	IV or IM
Cefpodoxime	10	8	PO
Fourth-generation cephalosporins:			
Cefepime	11	8	IV (foals)
	2.2		IV (adults)
Cefquinome	4.5	12	IV or IM (foals)
	1	24	IV or IM (adults)
Carbapenems			
Imipenem ^g	15	6	IV ^c
Aminoglycosides			
Amikacin	10	24	IV or IM (adults)
	25	24	IV or IM (foals)
Gentamicin	6.6	24	IV or IM (adults)
	12	36	IV or IM (foals < 2 weeks)
Fluoroquinolones			
Ciprofloxacin ^b	5.5	24	IV ^h
Enrofloxacin ^b	5.5	24	IV

(continued)

Table 27.3. Common antimicrobial drug dosage in horses.^a (*continued*)

Drug Preparation	Dose (mg/kg)	Dose interval (h)	Route of administration
	7.5	24	PO
Orbifloxacin ^b	7.5	24	PO
Marbofloxacin ^b	2	24	IV
	3.5	24	PO
Difloxacin ^b	7.5	24	PO
Moxifloxacin ^b	5.8	24	PO
Fleroxacin ^b	5	24	IV or PO
Levofloxacin ^b	4	24	IV or IM
Tetracyclines			
Oxytetracycline	5	12	IV ^c
Doxycycline	10	12	PO ^d
Minocycline	4	12	PO
	2.2	12	IV
Macrolides			
Erythromycin (phosphate, stearate, ethylsuccinate, estolate)	25	6–8 PO	
Erythromycin (lactobionate, gluceptate)	5	6 IV ^c	
Azithromycin	10	24–48 ^e	PO
Clarithromycin	7.5	12	PO
Other			
Chloramphenicol (palmitate or base)	50	6 or 12 ^f PO	
Chloramphenicol (sodium succinate)	25–50	6 or 12 ^f IV	
Metronidazole	25	12	PO
	35	12	Per rectum
Tinidazole	15	12	PO
Rifampin	5	12	PO
Sulfadiazine	24	12–24	PO
Trimethoprim-sulfonamide	30 (combined)	12	PO or IV
Pyrimethamine	1	24	PO
Vancomycin ^g	4.5–7.5	8	IV ^h
Sodium iodide (20 % solution)	20–40 ⁱ	24	IV ⁱ
Potassium iodide	10–40 ⁱ	24	PO ⁱ
Antifungal agents			
Amphotericin B	0.5–0.9 ^j	24	IV ^k
Fluconazole	14	loading dose	PO
	5	24	PO
Itraconazole	5	24	PO ⁿ
Voriconazole	4	24	PO
Ketoconazole	30 (in 0.2N HCl)	12	Intra-gastric ^l

^aPharmacokinetics data are available for horses but, in most cases, safety studies have not been performed in the equine species.

^bEnrofloxacin should not be used in young growing horses because of the risk of arthropathy. The problem might occur with other fluoroquinolones.

^cDilute and give by slow IV infusion.

^dAdminister orally only. Intravenous doxycycline has resulted in severe cardiovascular effects including collapse and death in some horses.

^eOnce a day for 5 days followed by q 48 h therapy.

^fAdminister BID in foals less than 5 days of age and QID thereafter.

^gShould be used only for the treatment of serious bacterial infections caused by microorganisms resistant to all other antimicrobial agents.

^hDilute and administer slowly.

ⁱMay cause abortion in pregnant mares.

^jPharmacokinetic studies are not available. Empirical dose based on human dose, measurement of serum levels in clinical cases, or anecdotal observation of positive clinical response in equine patients.

^kDilute in 5% dextrose and give over 2–4 hours.

^lAdminister by nasogastric tube to prevent irritation by 0.2N HCl.

^mAdminister every 7 days thereafter if prolonged treatment is necessary.

ⁿOral solution has significantly better bioavailability than capsules.