

**DRUGS AND DOSAGES IN DOMESTIC ANIMALS****Commonly Used Cardiovascular Drugs and Dosages**

<b>Drug</b>	<b>Dose</b>
Amrinone	Dog and cat: 1-3 mg/kg, IV, loading dose, then 30-100 µg/kg/min, IV, CRI*
Amlodipine	Dog: 0.1 mg/kg, PO, SID Cat: 0.18 mg/kg, PO, SID (0.625-1.25 mg/cat, PO, SID)
Aspirin, antiplatelet	Dog: 5-10 mg/kg, PO every 24-48 hr Cat: 80 mg, PO every 48-72 hr
Atenolol	Dog: 0.25-1 mg/kg, PO, SID- BID Cat: 2-3 mg/kg, PO, BID
Benazepril	Dog and cat: 0.25-0.5 mg/kg, PO, SID
Boldenone undecylenate <sup>‡</sup>	Horse: 1.1 mg/kg, IM, every 3 wk
Desmopressin	Dog: 0.4 mg/kg, SC; 1 mg/kg in 20 mL saline, IV over 10 min
Diltiazem	Dog: 0.5-1.5 mg/kg, PO TID Cat: 0.5-2.5 mg/kg, PO, TID
CARDIZEM <sup>®</sup> CD (diltiazem)	Cat: 10 mg/kg, PO, BID
DILACOR XR <sup>®</sup> (diltiazem)	Cat: 15-30 mg/kg, PO, SID
Digoxin <sup>‡</sup>	Dog: 0.0055-0.011 mg/kg, PO, BID; 0.22 mg/m <sup>2</sup> , PO, BID Cat: 0.005-0.01 mg/kg, PO, every 24-48 hr
Dobutamine	Dog: 2-20 µg/kg/min, IV, CRI Cat: 0.5-10 µg/kg/min, IV, CRI
Dopamine	Dog: 2-15 µg/kg/min, IV, CRI
Enalapril <sup>§</sup>	Dog and cat: 0.5 mg/kg, PO, SID-BID <sup>¶</sup>
Epoetin alfa	Dog and cat, initial: 100 U/kg, SC, 3×/wk Dog and cat, maintenance: 75-100 U/kg, SC, 2-3×/wk
Folic acid	Dog: 5 mg, PO, SID Cat: 2.5 mg, PO, SID
Heparin, high dose	Dog: 150-250 U/kg, SC, TID Cat: 250-375 U/kg, SC, BID
Heparin, low dose	Dog and cat: 75 U/kg, SC, TID Horse: 25-100 U/kg, SC, TID
Hydralazine	Dog: 0.5-3 mg/kg, PO, BID Cat: 0.5-0.8 mg/kg, PO, BID
Iron (dextrans) <sup>‡</sup>	Pig, neonate: 100 mg, IM¶
Iron (ferrous sulfate)	Dog: 100-300 mg, PO, SID

Lidocaine**	Cat: 50-100 mg, PO, SID
Mexiletine	Dog: 1-2 mg/kg, IV; 40-80 µg/kg/min, IV, CRI
	Dog: 4-10 mg/kg, PO, TID
	(continued)
Nandrolone decanoate	Dog: 1-1.5 mg/kg, IM, weekly
	Cat: 1 mg/kg, IM, weekly
	Horse: 1 mg/kg, IM, every 4 wk
Nitroglycerin ointment (1 in. = 15 mg)	Dog: 4-15 mg, topically, TID
	Cat: 2-4 mg, topically, TID
Nitroprusside	Dog: 1-10 µg/kg/min, IV, CRI
Oxymetholone	Dog and cat: 1-5 mg/kg, PO, every 18-24 hr
Phenytoin	Dog: 30-50 mg/kg, PO, TID
Pimobendan	Dog: 0.1-0.3 mg/kg, PO, BID
Procainamide	Dog: 10-30 mg/kg, PO, QID; 10-40 µg/kg/min, IV, CRI
	Cat: 3-8 mg/kg, PO, TID-QID; 10-20 µg/kg/min, IV, CRI
	Horse: 25-35 mg/kg, PO, TID; 1 mg/kg/min, IV TO A MAXIMUM OF 20 mg/kg
Propranolol	Dog: 0.1-2 mg/kg, PO, TID
	Cat: 2.5-5 mg/cat, PO, TID
Quinidine sulfate	Dog and cat: 4-20 mg/kg, PO, TID-QID
	Horse: 22 mg/kg, PO every 2 hr
Quinidine gluconate	Horse: 1-1.5 mg/kg, IV every 5-10 min
Stanozolol††	Dog: 1-4 mg, PO, BID; 25-50 mg, IM, weekly¶
	Cat: 1 mg, PO, BID; 25 mg, IM, weekly¶
	Horse: 0.55 mg/kg, IM, weekly for up to 4 wk¶
Tocainide	Dog: 15-20 mg/kg, PO, TID
tPA	Cat: 0.25-1 mg/kg/hr, IV (total dose 1-10 mg/kg)
Vitamin B <sub>12</sub> #	Dog: 100-200 µg, PO or SC, SID
	Cat: 50-100 µg, PO or SC, SID
Warfarin sodium	Dog and cat: 0.1-0.2 mg/kg, PO, SID
	Horse: 0.067-0.167 mg/kg, PO, SID

\* CRI = continuous rate infusion

† Approved by FDA for adjunctive therapy in treating debilitated horses.

‡ Approved by FDA for initial and chronic treatment of heart failure and supraventricular tachycardia, atrial flutter, and atrial fibrillation in dogs.

§ Approved by FDA for treatment of mild, moderate, or severe heart failure in dogs due to mitral regurgitation and/or reduced ventricular contractility.

¶ FDA/CVM approved dosage regimen

# Several FDA-approved products are available.

\*\* Several FDA-approved products are available; however, none are specifically approved for control of cardiac arrhythmias.

†† Approved by FDA as a sterile suspension and oral tablets for use in dogs, cats, and horses.

### Drugs Used to Stimulate Appetite

Drug	Dosage
Prednisone	1 mg/kg, PO, every other day
Stanozolol	0.25-3 mg/kg, PO, SID; 2-10 mg/kg, IM, once weekly
Boldenone undecylenate	2.5 mg/kg, IM, every 2-4 wk
Diazepam	Cats: 0.005-0.4 mg/kg, IM or IV, SID; 1 mg/kg, PO, SID
Oxazepam	Cats: 2 mg, PO, BID
Cyproheptadine	Cats: 1-4 mg, PO, BID
Megestrol acetate	Dogs: 5 mg/kg, PO, SID

### Emetic Drugs

Drug	Dosage
Apomorphine	Dogs: 4 mg/kg, PO; 0.02 mg/kg, IV; 0.3 mg/kg, SC; 0.25 mg in the conjunctival sac
Xylazine	Cats: 0.4-0.5 mg/kg, IV or IM
Syrup of ipecac	3-6 mL/kg, PO
Hydrogen peroxide	Dogs: 5-10 mL, PO
Salt	Dogs: 1 tsp of table salt into pharynx

### Antiemetic Drugs

Drug	Dosage
Acepromazine	0.025-0.2 mg/kg, IV, IM, SC, maximum 3 mg; 1-3 mg/kg, PO
Chlorpromazine	0.5 mg/kg, IV, IM, SC, TID-QID
Prochlorperazine	0.1 mg/kg, IM, TID-QID; 1 mg/kg, PO, BID
Isopropamide	0.2-1.0 mg/kg, PO, BID
Propantheline	0.25 mg/kg, PO, TID
Dimenhydrinate	4-8 mg/kg, PO, TID
Diphenhydramine	2-4 mg/kg, PO, TID
Cyclizine	4 mg/kg, PO, TID
Meclizine	4 mg/kg, PO, SID
Butorphanol	0.2-0.4 mg/kg, IM, SID-BID
Metoclopramide	0.1-0.5 mg/kg, IM, SC, or PO, TID; 0.01-0.02 mg/kg/hr, IV infusion
Ondansetron	0.1-0.2 mg/kg, PO, SID-BID ; 0.22 mg/kg, IV, BID-TID
Dolasetron	0.6 mg/kg, IV, SID

**Antiulcerative Drugs**


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<b>Drug</b>	<b>Dosage</b>
Antacids	2-10 mL, PO, every 2-4 hr
Cimetidine	Dogs: 5-10 mg/kg, PO, QID Horses: 4 mg/kg, IV, BID; 18 mg/kg, PO, BID
Ranitidine	Dogs: 0.5 mg/kg, PO, SC, or IV, BID Horses: 1.3 mg/kg, IV, BID; 11 mg/kg, PO, BID
Famotidine	Dogs: 0.5-1 mg/kg, PO or IV, SID Horses: 0.4 mg/kg, IV, BID; 3 mg/kg, PO, BID
Sucralfate	Cats: 250 mg, BID-TID Dogs: 500 mg to 1 g, TID-QID Foals: 1-2 g, QID
Omeprazole	Dogs: 0.5-1 mg/kg, PO, SID Horses: 4 mg/kg, PO, SID for treatment; 2 mg/kg, PO, SID to prevent recurrence
Misoprostol	Dogs: 2-5 µg/kg, PO, TID-QID

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**Antidiarrheal Drugs**


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<b>Drug</b>	<b>Dosage</b>
Kaolin-pectin	1-2 mL/kg, PO, QID
Activated charcoal	2-8 g/kg, PO
Bismuth subsalicylate	1-3 mL/kg/day in divided doses, PO
Aminopentamide	0.1-0.4 mg, IM, SC, or PO, BID
Isopropamide	0.2-1.0 mg/kg, PO, BID
Propantheline	0.25-0.5 mg/kg, PO, BID-TID
Paregoric	0.06 mg/kg, PO, TID
Diphenoxylate	0.05-0.1 mg/kg, PO, QID
Loperamide	0.08 mg/kg, PO, TID-QID

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**Drugs Used for Chronic Colitis**


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<b>Drug</b>	<b>Dosage</b>
Sulfasalazine	10-30 mg/kg, PO, BID-TID
Tylosin	40-80 mg/kg, SID
Metronidazole	10-30 mg/kg, PO, SID-TID
Prednisone	2-4 mg/kg, PO, every other day
Raw linseed oil	1 oz/day in the feed
Azathioprine	50 mg/m <sup>2</sup> , PO, SID for 2 wk, then every other day

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**Prokinetic Drugs**


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<b>Drug</b>	<b>Dosage</b>
Metoclopramide	Dogs and cats: 0.2-0.5 mg/kg, PO or SC, TID; 0.01-0.02 mg/kg/hr, IV infusion Horses: 0.125-0.25 mg/kg, diluted in 500 mL of polyionic solution and administered IV over 60 min

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Domperidone	0.1-0.5 mg/kg, IM; 0.5-1.0 mg/kg, PO
Cisapride	Dogs: 0.1 mg/kg, PO, TID Cats: 2.5 mg/cat, TID for cats <5 kg, and 5.0 mg/cat for cats >5 kg Horses: 0.1 mg/kg, PO, TID
Erythromycin	0.5-1.0 mg/kg, PO, BID-TID
Ranitidine	1-2 mg/kg, PO, BID
Nitazidine	2.5-5 mg/kg, PO, BID
Neostigmine	0.02 mg/kg, SC, as needed
Lidocaine	Horses: 1.3 mg/kg as a bolus followed by a continuous infusion of 0.05 mg/kg/min

**Cathartic and Laxative Drugs**

Drug	Dosage
Castor oil	Dogs: 5-25 mL, PO Foals: 25-50 mL, PO
Bisacodyl	Dogs: 5-20 mg, PO, SID- BID Cats: 2.5-5.0 mg, PO, SID-BID
Magnesium sulfate (Epsom salts)	Dogs: 5-25 g, PO Cats: 2-5 g, PO Horses: 30-100 g, PO
Magnesium hydroxide (milk of magnesia)	Dogs: 5-10 mL, PO Cats: 2-6 mL, PO Horses: 1-4 L, PO
Lactulose	Dogs: 5-15 mL, PO, TID Cats: 2-3 mL, PO, TID
Docusate sodium, docusate calcium, docusate potassium	Dogs and cats: 2 mg/kg, PO, SID Horses: 10-20 mg/kg in 2 L water, PO, every other day

**Drugs for Ruminant Digestive Disorders**

Agents for Disorders	Drug	Dosage
Esophageal obstruction	Xylazine	0.05 mg/kg, IM in cattle
Ruminotorics	Mineral oil	1 to 2 L
Ruminal fluid transfer	Dictylo sodium sulfosuccinate	90-120 mL in 1-2 L water, PO
	Strained fresh ruminal juice	At least 3 L; 8-16 is ideal in cattle, sheep require 1 L, PO
Antifoaming Agents	Poloxalene	25-50 g, PO (via stomach tube)
	Polymerized methyl silicone (3.3 % emulsion)	Cattle: 30-60 mL, Sheep: 7-15 mL given same as poloxalene
	Docusate sodium in emulsified soybean oil	6-12 fl oz containing 240 mg/mL
Ruminoreticular Antacids	Vegetable oil [peanut oil, sunflower oil, or soybean oil]	Cattle: 60 mL; Sheep: 10-15 mL must be given PO
	Magnesium hydroxide	Cattle: 100-300 g, Sheep: 10-30 g PO
Ruminoreticular Acidifying Agents	Magnesium carbonate	Cattle: 10-80 g, Sheep: 1-8 g, PO
	Activated charcoal	2 g/kg PO
Modulators of Ruminoreticular Motility	Acetic acid or Vinegar	Cattle: 4-8 L, Sheep: 250-500 mL, PO
	Neostigmine	Cattle: 0.02 mg/kg, SC; Sheep: 0.01-0.02 mg/kg, SC

**Dosages of Antistaphylococcal Antibiotics**

<b>Drug</b>	<b>Dosage</b>
<b>Cephalosporins</b>	
Cephalexin	20-30 mg/kg, BID
Cephadroxil	Dogs: 20 mg/kg, BID Cats: 20 mg/kg, SID
Cefaclor	10-25 mg/kg, BID
<b>Penicillins</b>	
Amoxicillin-clavulanate	13.75 mg/kg, BID
Oxacillin	22 mg/kg, TID
<b>Fluoroquinolones</b>	
Enrofloxacin	5 mg/kg, SID
Marbofloxacin	2 mg/kg, SID
Orbifloxacin	2.5 mg/kg, SID
<b>Sulfonamides</b>	
Trimethoprim-sulfadiazine	15-30 mg/kg, BID
Trimethoprim-sulfamethoxazole	15-30 mg/kg, BID
<b>Macrolides and lincosamide</b>	
Erythromycin	15-30 mg/kg, TID
Clindamycin	Dogs: 10-20 mg/kg, BID Cats: 12.5-25 mg/kg, BID
Lincomycin	10-20 mg/kg, BID

**Dosages of Antifungal Medications**

<b>Drug</b>	<b>Dosage</b>
Griseofulvin	
Microsize	25-60 mg/kg, PO, BID
Ultramicrosize	2.5-15 mg/kg, PO, BID
Ketoconazole	10 mg/kg, PO, SID; 20 mg/kg, PO, every 48 hr
Itraconazole	5-10 mg/kg, PO, SID
Fluconazole	10-20 mg/kg, PO, BID
Amphotericin B	Dogs: 0.25-0.75 mg/kg, IV, 3 times/wk to total cumulative dose of 4-8 mg/kg or until azotemia develops Cats: 0.1-0.25 mg/kg, IV, 3 times/wk to cumulative dose of 4-6 mg/kg
Flucytosine	25-50 mg/kg, PO, TID-QID
Potassium iodine	Dogs: 40 mg/kg, PO, SID-BID with food Cats: 20 mg/kg, PO, SID-BID with food

**Dosage of Antihistamine Drugs**

<b>Drug</b>	<b>Dosage</b>
Diphenhydramine	2-4 mg/kg, BID-TID

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Hydroxyzine	0.5-2 mg/kg, TID-QID
Clorpheniramine	Cats: 2-4 mg, BID Dogs (<20 kg): 4 mg, TID Dogs (>20 kg): 8 mg, TID; 0.25-0.5 mg/kg, TID
Cyproheptadine	0.25-0.5 mg/kg, TID; 1.1 mg/kg, BID
Terfenadine	5 mg/kg, BID
Clemastine	Cats: 0.05 mg/kg, BID Dogs: 0.1 mg/kg, BID
Trimeprazine	1 mg/kg, BID

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### Psychotropic Drugs Used for Skin Disorders

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Drug	Dosage
<i>Antidepressants</i>	
Clomipramine	Dogs: 1-3 mg/kg, BID Cats: 0.5-1.5 mg/kg, SID
Amitriptyline	1-3 mg/kg, BID
Doxepin	0.5-2 mg/kg, BID
Fluoxetine	1 mg/kg, SID
<i>Anxiolytics</i>	
Diazepam	1-2 mg/kg, BID
Phenobarbital	0.5-2.2 mg/kg, BID 15 mg/cat, twice weekly
Hydroxyzine	2.2 mg/kg, TID
<i>Opiate Antagonist</i>	
Naltrexone	2.2 mg/kg, SID

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### Competitive Nondepolarizing Agents and Antagonists

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Drug	Dosage
Tubocurarine chloride	Horses: $\leq 0.22$ -0.25 mg/kg, IV Dogs, cats: $\leq 0.4$ mg/kg, IV
Gallamine triethiodide	All species (except pigs): 0.8-1 mg/kg, IV
Pancuronium bromide	Dogs, cats: 0.6 mg/kg, IV
Alcuronium chloride	Dogs, cats: 0.1 mg/kg, IV
Atracurium besylate	Dogs, cats: 0.5 mg/kg, IV
<i>Antagonists</i>	
Neostigmine	0.04 mg/kg, with atropine at 0.04 mg/kg, IV
Pyridostigmine	0.2-0.25 mg/kg, with atropine at 0.04 mg/kg, IV
Edrophonium	0.125 mg/kg, IV

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**Skeletal Muscle Relaxants**

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Methocarbamol	Dogs, cats: 44 mg/kg, IV, up to 330 mg/kg/day for tetanus or strychnine poisoning; 132 mg/kg/day, PO, divided BID-TID Horses: 4.4-55 mg/kg, IV
Guaiifenesin	Dogs: 44-88 mg/kg, IV Horses, ruminants: 66-132 mg/kg, IV
Diazepam	Cats: 2-5 mg, PO, TID, for urethral obstruction
Dantrolene	Horses: 15-25 mg/kg, slow IV, QID; 2 mg/kg, PO, SID, for prevention of exertional rhabdomyolysis Swine: 3.5 mg/kg, IV
Phenytoin	Horses: 6-8 mg/kg, PO, SID, increase by 1 mg/kg every 3 days until rhabdomyolysis is prevented or the horse appears sedated

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**Anabolic Steroids**

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<b>Drug</b>	<b>Dosage</b>
Boldenone undecylenate	Horses: 1.1 mg/kg, IM, every 3 wk
Nandrolone decanoate	Dogs: 1-5 mg/kg, IM, once/wk Cats: 10-20 mg, IM, once/wk
Stanozolol	Dogs: 1-4 mg, PO, BID; 25-50 mg, deep IM, once/wk Cats: 1-2 mg, PO, BID; 25 mg, deep IM, once/wk Horses: 0.55 mg/kg, deep IM, once/wk

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**Anticonvulsants Drugs**

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<b>Anticonvulsant Drug</b>	<b>Dosage and Frequency</b>	<b>Half-life</b>	<b>Time to Steady State</b>	<b>Therapeutic Level</b>	<b>Adverse Effects/Comments</b>
<i>First-line Anticonvulsant Drugs</i>					
Phenobarbital	Dogs: 2-4 mg/kg, PO, BID (starting dose); up to 10 mg/kg, BID	40-90 hr (Beagles 25-38 hr)	10-24 days	15-45 µg/mL (66-200 µmol/L), preferably keep values within 20-35 µg/mL (85-150 µmol/L)	Sedation, polydipsia, induces P450 system, increase in liver enzymes; liver disease is uncommon. Adjust dosage by monitoring serum levels.
	Cats: 1-2 mg/kg, PO, BID (starting dose) Horses: 3-5 mg/kg,	34-43 hr 18 hr 13 hr		10-30 µg/mL 10-40 mg/ml (43-175 mmol/L)	Liver enzymes do not increase in cats. Adjust dose in all species by monitoring serum

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	PO, SID; up to 11 mg/kg, PO, SID Foals: 20 mg/kg diluted to 30 mL with normal saline IV over 30 min, then 9 mg/kg diluted and infused as above TID; 8 mg/kg, PO, TID				levels.
Bromide (potassium salt)	Dogs, horses: 20-40 mg/kg, PO, SID or divided BID if GI upset. Dogs: loading dose 400-600 mg/kg, PO or per rectum, divided into 4 doses, given over 24 hr	Dogs: 20-46 days Cats: 10 days Horses: 5 days	Dogs: 100-200 days Cats: 6 wk	Bromide alone: 1-3 mg/mL (15-20 µmol/L) Bromide/phenobarbital combined: 1-2 mg/mL	Sedation, weakness, polydipsia vomiting, polyphagia, skin rash. Respiratory problems occur in cats (may be fatal). Use with extreme caution in cats and monitor with thoracic radiographs.
Bromide (sodium salt)	17-30 mg/kg, PO, SID or divided BID if GI upset				Reduce dose with renal insufficiency. High chloride intake increases bromide elimination. Chloride content of diet should be stable. Decrease the dose by 15% for the sodium salt to account for the higher bromide content.
Diazepam	Dogs: 0.5-2 mg/kg per rectum at onset of seizure; repeat up to 3 times in 24 hr Cats: 0.25-2.0 mg/kg, PO,	Dogs: 2.5-3.2 hr Cats: 5.5 hr Horses: 7-22 hr			Client treatment at home for cluster seizures or status epilepticus. Sedation, liver failure in cats.

divided BID-  
TID Horses: 25-  
50 mg/kg, IV;  
repeat in 30  
min if  
necessary  
Foals: 0.02-0.4  
mg/kg, IV;  
repeat in 30  
min if  
necessary

**Second-line (Add-on) Anticonvulsant  
Drugs**

Clonazepam	Dogs: 0.1-0.5 mg/kg, PO, BID -TID	1.5-3 hr		22-77 ng/mL	Extremely potent benzodiazepine; sedation, withdrawal signs if drug stopped abruptly.
Clorazepate	Dogs: 2-6 mg/kg, PO,BID	5-6 hr	1-2 days	20-75 µg/L	15 times less potent than clonazepam; sedation, withdrawal seizures.
Felbamate	Dogs: 15 mg/kg, PO,TID; increase by 15 mg/kg biweekly until seizures controlled; maximal (toxic) dosage 300 mg/kg	5-6 hr	1 day	125-250 µmol/L*	Blood dyscrasia; induces P450 system, liver disease. Use with care with other potentially hepatotoxic drugs.
Gabapentin	Dogs: 25-60 mg/kg, PO, divided TID - QID; 100-300 mg/dog, TID	3-4 hr	<24 hr	4-16 mg/L* (70-120 µmol/L)	Sedation, dizziness, ataxia, fatigue, diarrhea; reduce dose with renal dysfunction.
Levetiracetam	Dogs: 20 mg/kg, PO,TID; 500-4,000 mg/day	4-10 hr	2-3 days	35-120 µmol/L*	Restlessness, vomiting, ataxia at dosages >400 mg/kg/day.
Topiramate	Dogs: 5-10 mg/kg/day, PO, divided BID	12-30 hr	3-5 days	2-25 mg/L (15-60 µmol/L)*	GI upset, irritability

Valproic acid	Dogs: 10-60 mg/kg, PO, TID	90-120 min	<24 hr			Probably ineffective due to very short half-life; liver toxicity and pancreatitis.
Zonisamide	Dogs: 4-8 mg/kg/day, PO, divided; up to 10 mg/kg, BID	15-20 hr	3-4 days	10-40 mg/L (45-180 mmol/L)*		Sedation, ataxia, loss of appetite

**Tranquilizers and Sedatives**

Drug	Dosage						
	Dogs	Cats	Ferrets	Rabbits	Horses	Cattle	Pigs
<b>Benzodiazepines</b>							
Diazepam	1 mg/kg, IV or PO	1 mg/kg, IV	2 mg/kg, IM	2 mg/kg, IV; 5-10 mg/kg, IM or IP	0.05-0.4 mg/kg, IV	0.5-1.5 mg/kg, IV	0.5-10 mg/kg, IM; 0.5-1.5 mg/kg, IV
Midazolam				2 mg/kg, IM or IV			
<b>Butyrophenone</b>							
Azaperone					0.4-0.8 mg/kg, IM		2.2 mg/kg, IM
<b>Phenothiazines</b>							
Acepromazine maleate	0.05-0.1 mg/kg, IV, IM, or SC; 0.55-2.2 mg/kg, PO, TID-QID	0.11-0.22 mg/kg, IV, IM, or SC; 1.1-2.2 mg/kg, PO, BID-TID	0.1-0.25 mg/kg, IM or SC	1-5 mg/kg, IM	0.04-0.1 mg/kg, IV, IM, SC, or PO, SID	0.05-0.1 mg/kg, IV, IM, or SC	0.1-0.2 mg/kg, IV, IM, or SC
Chlorpromazine hydrochloride	0.55-4.4 mg/kg, IV; 1.1-6.6 mg/kg, IM; 3.2 mg/kg, PO, TID-QID as needed	1-2 mg/kg, IV or IM, BID		3 mg/kg, IV or IM (may produce myositis)			0.5-4.0 mg/kg, IM
Promazine	2-6	2-4.4			0.4-1 mg/kg,	0.4-1	0.4-1

hydrochloride	mg/kg, IV, IM, or PO, TID-QID	mg/kg, IV, IM, or PO, TID-QID	IV or IM; 1-2 mg/kg, PO	mg/kg, IV or IM; 1.6-2.8 mg/kg, PO
Triflupromazine hydrochloride	1.1-2.2 mg/kg, IV; 2.2-4.4 mg/kg, IM	4.4-8.8 mg/kg, IM	0.22-0.33 mg/kg, IV or IM (maximum 100 mg/horse/day)	

**Analgesics**

Drug	Dosage						
	Dogs	Cats	Ferrets	Rabbits	Horses	Cattle	Pigs
<i>Opioid Analgesics</i> *							
Buprenorphine	0.01-0.02 mg/kg, SC, BID	0.005-0.01 mg/kg, SC or IM, BID	0.01-0.03 mg/kg, IV, IM, or SC, BID-TID	0.02-0.05 mg/kg, SC, IM, or IV, BID			0.005-0.02 mg/kg, IM or IV, BID-QID
Butorphanol tartrate	0.2-0.4 mg/kg, IM or SC; 0.55 mg/kg, PO, every 4 hr	0.1-0.2 mg/kg, IV; 0.2-0.4 mg/kg, IM or SC, every 4 hr	0.4 mg/kg, IM, every 4-6 hr	0.1-0.5 mg/kg, IV, every 4 hr	0.05-0.1 mg/kg, IV, IM, or SC		0.1-0.3 mg/kg, IM
Meperidine hydrochloride	2-10 mg/kg, IM or SC, every 2 hr	2-10 mg/kg, IM or SC, every 2 hr	5-10 mg/kg, IM or SC, every 2-4 hr	10-20 mg/kg, IM or SC, every 2-3 hr	0.2-0.4 mg/kg, IV; 1-3 mg/kg, IM or SC	500 mg/co w, IV	4-10 mg/kg, IM or IV
Morphine sulfate	0.22-0.88 mg/kg, IM or SC, every 4-6 hr as needed	0.1 mg/kg, IM or SC, as needed	0.5-5 mg/kg, IM or SC, QID	2-5 mg/kg, SC or IM, every 2-4 hr	0.2 mg/kg, IV; 0.2-0.4 mg/kg, IM		0.2-1 mg/kg, IM, every 4 hr
Nalbuphine	0.5-2.0 mg/kg, SC, every 4-8 hr	1.5-3.0 mg/kg, IV, every 3 hr		1-2 mg/kg, IV,			

				every 4 hr			
Oxymorphone hydrochloride	0.22 mg/kg, IV, IM, or SC, SID	0.1-0.2 mg/kg, IV, IM, or SC, SID		5-10 mg/kg, SC, IM, or IV, every 4 hr	0.02-0.03 mg/kg, IV or IM		0.15 mg/kg, IM
Pentazocine lactate	2-3 mg/kg, IM, every 4 hr; 15 mg/kg, PO, TID	2.2-3.3 mg/kg, IV, IM, or SC		10-20 mg/kg, SC or IM, every 4 hr; 5 mg/kg, IV, every 2-4 hr	0.33 mg/kg, IV; 1-3 mg/kg, SC or IM		2-5 mg/kg, IM, every 4 hr
<b>Nonopioid Sedative Analgesics</b>							
Xylazine hydrochloride	0.5-1 mg/kg, IV; 1-2 mg/kg, IM or SC	0.5-1 mg/kg, IV; 1-2 mg/kg, IM or SC	1 mg/kg, IM or SC		0.1-1 mg/kg, IV; 0.5-1.0 mg/kg, IM or SC	0.05-0.1 mg/kg, IV; 0.1-0.2 mg/kg, IM	2 mg/kg, IM
Detomidine					0.02-0.04 mg/kg, IV		
<b>Nonpsychotropic Analgesics</b>							
Acetaminophen	15 mg/kg, PO, QID as needed	Contraindicated					
Aspirin	10-25 mg/kg, PO, BID	10 mg/kg, PO, every 48 hr	0.5-20 mg/kg, PO, SID or D-TID	5-20 mg/kg, PO, SID	30-47.5 mg/kg, PO, BID-QID	26 mg/kg, IV; 100-124 mg/kg, PO, BID	10-20 mg/kg, PO, every 4 hr as needed
Carprofen	4 mg/kg, IV or SC, SID	4 mg/kg, IV or SC, SID		1.5 mg/kg, PO, BID	0.7 mg/kg, IV, IM, or SC, SID	0.7 mg/kg, IV, IM, or SC, SID	
Dipyrrone	28 mg/kg, IV, IM, SC, or	28 mg/kg, IV, IM, SC, or			5-10 g/horse	50 mg/kg, IV, IM, or	

	PO, TID	PO,TID			, IV or IM,TID as needed	IV, IM, or SC	SC
Flunixin meoglumine	1-2 mg/kg, PO, IV, or IM, SID up to 3 days	1 mg/kg, PO; 0.3-1 mg/kg, IM or SC, SIDup to 5 days	0.5-2 mg/kg , SC,SI D-BID	1.1 mg/kg, SC or IM, BID	1-2.2 mg/kg, IV; 2.2 mg/kg, IM or PO, SID	1.1-2.2 mg/kg, IM or PO, SID	1-2 mg/kg, IV or IM, SID
Ibuprofen	5-10 mg/kg, PO, SID-BID	5 mg/kg, PO,SID		10-20 mg/kg, IV, every 4 hr			
Indomethacin	10 mg/kg, PO, SID			10 mg/kg, IV or PO, every 4 hr		1.5 mg/kg, SID	
Ketoprofen	2 mg/kg, SC, IM, or IV, SID up to 3 days; 1 mg/kg, PO,SID up to 5 days	1 mg/kg, SID, SC up to 3 days, or PO up to 5 days		3 mg/kg, IM	2.2 mg/kg, IV, SID	2.2 mg/kg, IV; 3 mg/kg, IM, SID	
Meclofenami c acid	2.2 mg/kg, PO, SID	2.2 mg/kg, PO,SID			2.2 mg/kg, PO, SID		
Naproxen	5 mg/kg, PO, initial dose; 1.2-2.8 mg/kg, PO, SID for maintenance				5 mg/kg, IV; 10 mg/kg, PO, BI D		
Phenylbutazo ne	22 mg/kg, PO; 15 mg/kg, IV,TID(maxim um 0.8 g/dog/day)	15 mg/kg, IV,TID; 10-14 mg/kg, PO, BID			4.4 mg/kg, PO, BI Don day 1; 2.2 mg/kg, PO, BI Dfor 4 days; 2.2 mg/kg,	2-5 mg/kg, IV; 4-8 mg/kg, PO	2-5 mg/kg, IV; 4-8 mg/kg, PO

PO, SID  
or  
every  
other  
day

### Antitussive Drugs

Drug	Dosage
Morphine	Dogs: 0.1 mg/kg, IM, TID-QID
Codeine	Dogs: 1-2 mg/kg, PO, BID-QID
Hydrocodone	Dogs: 0.25 mg/kg, PO, BID-QID
Dextromethorphan	Dogs, cats: 0.5-1 mg/kg, PO, TID-QID
Butorphanol	Dogs: 0.055-0.11 mg/kg, SC, BID-QID; or 0.055-1.1 mg/kg, PO, BID-QID

### β-Adrenergic Receptor Agonist Drugs

Drug	Dosage
Epinephrine	Dogs: 0.05-0.5 mg, intratracheally or IV Cats: 0.1 mg, IV or IM Large animals: 0.1 mg/kg, IV, SC, or IM
Isoproterenol	Dogs: 0.1-0.2 mg, IM or SC, QID Cats: 4-6 µg, IM, every 30 min as needed Horses: 0.4 µg/kg, IV (diluted)
Terbutaline	Dogs, cats: 0.1 mg/kg, SC, every 4 hr, or 0.03 mg/kg, PO, TID Horses: 0.0033 mg/kg, IV, or 0.2-0.6 mg/kg, PO, BID
Albuterol	Dogs: 0.05 mg/kg, PO, TID Horses: 8 µg/kg, PO, BID
Clenbuterol	Horses: 0.8-3.2 µg/kg, PO, BID

### Methylxanthine Bronchodilators

Drug	Dosage
Theophylline (parenteral)	Dogs: 10 mg/kg, IV (slow) or IM Horses: 15 mg/kg, IV (slow)
Theophylline (oral)	Dogs: 5-7 mg/kg, PO, TID Cats: 3 mg/kg, PO, BID Horses: 10-15 mg/kg, PO, BID
Theophylline (extended-release tablets)	Dogs: 20 mg/kg, PO, SID Cats: 25 mg/kg, PO, SID Horses: 15 mg/kg, PO, SID
Aminophylline (parenteral)	Dogs: 10 mg/kg, IV (slow) Cats, horses: 5 mg/kg, IV (slow)
Aminophylline (oral)	Dogs: 10 mg/kg, PO, TID Cats: 5 mg/kg, PO, BID Horses: 15 mg/kg, PO, BID

### Drugs Used to Treat Urinary Tract Infections in Small Animals

Drug	Dosage	=Typical Antimicrobial Activity
Amoxicillin	11 mg/kg, PO, TID	Staphylococci, streptococci, enterococci, <i>Proteus</i>

Ampicillin	25 mg/kg, PO, TID	Staphylococci, streptococci, enterococci, <i>Proteus</i>
Amoxicillin/ clavulanic acid	25 mg/kg, PO, TID	Staphylococci, streptococci, enterococci, <i>Proteus</i>
Cephalexin/c efadroxil	30 mg/kg, PO, TID	Staphylococci, streptococci, <i>Proteus</i> , <i>Escherichiacoli</i> , <i>Klebsiella</i>
Ceftiofur	2.0 mg/kg, SC, SID	<i>E coli</i> , <i>Proteus</i>
Enrofloxacin	5 mg/kg, PO, SID	Staphylococci, some streptococci, some enterococci, <i>E coli</i> , <i>Proteus</i> , <i>Klebsiella</i> , <i>Pseudomonas</i> , <i>Enterobacter</i>
Gentamicin	4-6 mg/kg, SC, SID	Staphylococci, some streptococci, some enterococci, <i>E coli</i> , <i>Proteus</i> , <i>Klebsiella</i> , <i>Pseudomonas</i> , <i>Enterobacter</i>
Nitrofurantoin	5 mg/kg, PO, TID	Staphylococci, some streptococci, some enterococci, <i>E coli</i> , <i>Klebsiella</i> , <i>Enterobacter</i>
Tetracycline	18 mg/kg, PO, TID	Streptococci, some activity against staphylococci and enterococci at high urine concentrations
Trimethoprim/sulfa	15 mg/kg, PO, BID	Streptococci, staphylococci, <i>E coli</i> , <i>Proteus</i> , some activity against enterococci and <i>Klebsiella</i>

### Dosages of Diuretics

Drug	Dosage
Furosemide	4-6 mg/kg IV, IM, or SC for acute therapy Dogs: 2-4 mg/kg, PO, SID-TID Cats: 1-2 mg/kg, PO, SID-BID Large animals: 0.5-1.0 mg/kg, IV or IM, SID
Hydrochlorothiazide	Dogs and cats: 2-4 mg/kg, PO, SID-BID
Chlorothiazide	Dogs and cats: 20-40 mg/kg, PO, SID-BID
Spironolactone	Dogs: 2-4 mg/kg, PO, BID
Mannitol	0.25-0.50 g/kg, IV
Dimethyl sulfoxide	Large animals: 1 g/kg, IV or via nasogastric tube

### Drugs Used to Treat Urinary Incontinence

Drug	Dosage
Diethylstilbestrol	Dogs: 0.1-0.3 mg/kg/day, PO, for 7-10 days, followed by 1 mg/dog/wk
Phenylpropanolamine	Dogs: 1.5-2 mg/kg, PO, SID-TID
Ephedrine	Dogs: 1.2 mg/kg, PO, BID-TID Cats: 2-4 mg/kg, PO, BID-TID
Pseudoephedrine	Dogs >25 kg: 30 mg/dog, PO, TID Dogs <25 kg: 15 mg/dog, PO, TID
Testosterone propionate	Dogs: 2.2 mg/kg, IM, every 2-3 days



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 Testosterone cypionate Dogs: 2.2 mg/kg, IM, every 30-60 days
 

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### Dose Rates of Penicillins

Penicillins	Dosage, Route, and Frequency
Sodium penicillin G	10,000-20,000 IU/kg, IV or IM, QID
Potassium penicillin G	25,000 IU/kg, PO, QID
Procaine penicillin G	10,000-30,000 IU/kg, IM or SC, SID-BID
Benzathine penicillin G	10,000-40,000 IU/kg, IM (horses) or SC (cattle), every 48-72 hr
Penicillin V	15,000 IU/kg or 8-10 mg/kg, PO, TID
Cloxacillin	10 mg/kg, IM or PO, QID
Ampicillin	5-10 mg/kg, IV, IM, or SC, BID-TID 10-25 mg/kg, PO, BID-QID
Amoxicillin	4-7 mg/kg, IM, SID-BID 11 mg/kg, PO, BID (dogs) or SID-BID (cats)
Sodium carbenicillin	10-20 mg/kg, IV or IM, BID- TID
Potassium clavulanate:amoxicillin (1:4)	10-20 mg/kg (amoxicillin) and 2.5-5 mg/kg (clavulanate), PO, BID
Probenecid (prolongs blood levels of penicillins that have short plasma half-lives or that are costly)	1-2 mg/1,000 IU penicillin G (dogs), PO, QID
Amoxicillin-clavulanic acid	10-20 mg/kg, PO, BID- TID
Imepenem	1-7 mg/kg, IV or IM, TID- QID
Ticarcillin	15-110 mg/kg, IM or IV, every 4-8 hr

### Dose Rates of Cephalosporins

Cephalosporin	Dosage, Route, and Frequency
Cephalothin	20-35 mg/kg, IM or IV, TID- QID
Cephapirin	30 mg/kg, IM or IV, every 4-6 hr
Cefazolin	20-25 mg/kg, IM or IV, TID- QID
Cephalexin	10-30 mg/kg, PO, TID- QID
Cefadroxil	22 mg/kg, PO, BID
Ceftiofur	1.1 mg/kg, IM, SID

### Dose Rates of Aminoglycosides

Aminoglycoside	Dosage, Route, and Frequency
Gentamicin	3-6 mg/kg, IM or SC, SID- BID
Kanamycin	12-15 mg/kg, IM or SC, SID-BID

Streptomycin/dihydrostreptomycin	7.5-12.5 mg/kg, IM or SC, BID
Amikacin	5-7.5 mg/kg, IM or SC, BID
Netilmicin	3-6 mg/kg, IM or SC, SID- BID
Neomycin	15 mg/kg, PO, SID- BID
	0.5-1 g/quarter, intramammary, SID

**Dose Rates of Quinolones**

<b>Quinolone</b>	<b>Species</b>	<b>Dosage, Route, and Frequency</b>
Nalidixic acid	Cats, dogs	3 mg/kg, PO, QID
Norfloxacin	Dogs	10-20 mg/kg, PO, BID
Enrofloxacin	Cats	5 mg/kg, PO, SID or divided BID
	Dogs	5-20 mg/kg, PO, SID or divided BID
		2.5 mg/kg, SC, once then PO
	Beef cattle (not veal or dairy)	7.5-12.5 mg/kg, SC, once
		2.5-5 mg/kg, SC, SID
	Pigs	2.5-5 mg/kg, PO or IM, SID
	Preruminant calves	2.5-5 mg/kg, PO or SC, SID
Marbofloxacin	Cats, Dogs	2.75-5.5 mg/kg, PO, SID
Difloxacin	Dogs	5-10 mg/kg, PO, SID
Orbifloxacin	Cats, dogs	2.5-7.5 mg/kg, PO, SID

**Dose Rates of Sulfonamides**

<b>Sulfonamide</b>	<b>Species</b>	<b>Dosage, Route, and Frequency</b>
Sulfathiazole	Horses	66 mg/kg, PO, TID
	Cattle, sheep, pigs	66 mg/kg, PO, every 4 hr
Sulfamethazine	Cattle	220 mg/kg, PO or IV, SID (initial dose; half for subsequent doses)
Sulfadiazine	All	50 mg/kg, PO, BID
Sulfadimethoxine	All	55 mg/kg, PO, SID (initial dose; half for subsequent doses)
Sulfaethoxypyridazine	Cattle	55 mg/kg, PO, SID
	Pigs	110 mg/kg, PO, SID (initial dose, half for subsequent doses)
Sulfapyridine	Cattle	132 mg/kg, PO, BID (initial dose, half for subsequent doses)
Succinylsulfathiazole	All	160 mg/kg, PO, BID (initial dose, half for subsequent doses)

**Dose Rates of Tetracyclines**

<b>Tetracycline</b>	<b>Species</b>	<b>Dosage, Route, and Frequency</b>
Tetracycline	Cats, dogs	7 mg/kg, IM or IV, BID 20 mg/kg, PO, TID
Oxytetracycline	Cats, dogs	7 mg/kg, IM or IV, BID 20 mg/kg, PO, TID
	Cattle, sheep, pigs	5-10 mg/kg, IM or IV, SID
	Calves, foals, lambs, piglets	10-20 mg/kg, PO, BID-TID
	Horses	5 mg/kg, IV, SID-BID
Doxycycline	Dogs	5-10 mg/kg, PO, SID 5 mg/kg, IV, SID

### Dose Rates of Macrolides

<b>Macrolide</b>	<b>Species</b>	<b>Dosage, Route, and Frequency</b>
Erythromycin	Cattle	8-15 mg/kg, IM, SID-BID
	Cats	15 mg/kg, PO, TID
	Foals	25 mg/kg, IM, TID
Tylosin	Cattle	10-20 mg/kg, IM, SID-BID
	Pigs	10 mg/kg, IM, SID-BID 7-10 mg/kg, PO, TID
	Cats	10 mg/kg, IM, BID
Tilmicosin	Cattle	10 mg/kg, SC, once

### Dose Rates of Chloramphenicol and Florfenicol

<b>Drug</b>	<b>Species</b>	<b>Dosage, Route, and Frequency</b>
Chloramphenicol	Cats	45-60 mg/kg, PO, IV, or IM, BID
	Dogs	45-60 mg/kg, PO, IV, or IM, TID- QID
	Horses	50 mg/kg, PO, TID- QID, or IV, every 2-4 hr
Florfenicol	Cattle	20 mg/kg, IM, repeated in 48 hr

### Dose Rates of Liconsamides

<b>Lincosamide</b>	<b>Species</b>	<b>Dosage, Route, and Frequency</b>
Lincomycin	Cattle	10 mg/kg, IM, BID
	Pigs	10 mg/kg, IM, BID 7 mg/kg, in-feed
	Dogs	20 mg/kg, PO, SID
	Cats	10 mg/kg, IM, BID 25 mg/kg, PO, BID
Clindamycin	Dogs, cats	5-10 mg/kg, PO, BID

### Dose Rates of Polyene Macrolide Antibiotics

<b>Polyene Macrolide</b>	<b>Dosage, Route, and Frequency</b>
Amphotericin B (0.1 mg/mL in 5% dextrose)	0.1-1 mg/kg, given IV slowly, 3 times/wk Total dose: 4-11 mg/kg
Nystatin	50,000-150,000 U, PO, TID (dogs)
Pimaricin (5% ophthalmic solution)	1 drop, instilled into the eye, every 1-2 hr

**Dose Rates of Imidazoles**

<b>Imidazole</b>	<b>Dosage, Route, and Frequency</b>
Enilconazole	10 mg/kg in 5-10 mL, BID for 7-14 days
Fluconazole	5-10 mg/kg, PO, SID-BID
Itraconazole	5-10 mg/kg, PO, SID-BID
Ketoconazole	5-20 mg/kg, PO, BID (dogs)
Thiabendazole	44 mg/kg, PO, SID, or 22 mg/kg, PO, BID

**Dose Rates of Griseofulvin**

<b>Species</b>	<b>Dosage, Route, and Frequency</b>
Dogs, cats	Microsized: 10-30 (up to 130) mg/kg, PO, SID or divided BID-TID; Ultramicrosized: 5-10 (up to 50) mg/kg, PO, SID
Horses, cattle	5-10 mg/kg, PO, SID for 3-6 wk, or longer if required

**Dose Rates of Antiviral Drugs**

<b>Drug</b>	<b>Preparation</b>	<b>Dose, Route, and Frequency</b>	<b>Indication</b>
Idoxuridine	0.1% ophthalmic solution	1 drop, topical, every 5-6 hr	
	0.5% ophthalmic solution	1 drop, topical, every 1-2 hr	
Trifluridine	1% ophthalmic solution	1 drop, topical, every 2 hr initially (2 days) then 3-8 times daily	Ocular herpesvirus infection
Vidarabine	3% ophthalmic solution	0.4-1 cm ointment, topical, every 5-6 hr; 3-6 times daily	Ocular herpesvirus infection
	200-mg/mL suspension for injection	10-30 mg/kg, IV, SID as CRI for 12-24 hr	
Acyclovir	200-mg capsules or tablets	200 mg, PO, QID, every 4 hr, or 5 times/day	Feline herpesvirus
	5% cutaneous ointment	Cover lesion, topical, every 3 hr, 6 times/day	
	200 mg/5 mL	80 mg/kg (mixed with peanut butter),	Pacheco's

	suspension	PO, SID for 7-14 days	disease in birds
	500 mg/vial powder	250-500 mg/m <sup>2</sup> , IV, TID, infused over at least 1 hr	
Ganciclovir	500 mg/vial powder	2-5, IV, BID-TID	
Ribavirin		11 mg/kg, IV, SID for 7 days	Susceptible viral infections
	6 g/100 mL vial powder	Using SPAC-2 nebulizer only, inhalation, 8-18 hr period daily	
Amantadine	100- and 500-mg capsules	100 mg total (humans), PO, SID-BID	
	Syrup 10 mg/mL	100 mg total (juveniles), PO, SID	
Rimantadine		200-300 mg total (humans), PO, SID	
Interferon α-2	3 × 10 <sup>6</sup> IU/vial	3 × 10 <sup>6</sup> IU/human, SC, IM, SID 0.5-5.0 U/kg, PO, SID 100,000 U/kg, SC, SID	FeLV-associated disease
		1 U, PO, SID	FeLV-associated disease
			FeLV appetite stimulant
		15-30 U, PO, IM, SC, SID on alternate weeks	FIP, FIV

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