

BIRDS

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The development of safe and therapeutic drug dosages for birds is in its infancy. New information is rapidly becoming available. Dosages in these tables that have been established by blood level determination are indicated by asterisks. Other dosages have been developed by clinical trial only.

TABLE 1. ANTIBIOTICS FOR BIRD DISEASES

Drug	Form	Route	Species
Amikacin	Injectable, 50 mg or 250 mg/ml	IM	Psittacines
Amoxicillin	Suspension	PO	Most
Ampicillin	Oral suspension	PO	Amazon parrots*
	Injectable	IM	Amazon parrots*
	Capsule	Water	Chicken*
	Capsule	Water	Most
Carbenicillin	Injectable	IM or IV	Psittacines
	Intratracheal	Intratracheal	Psittacines
Cefotaxime	Injectable	IM	Most
Cephalexin	Oral suspension	PO	Most*
Cephathin	Injectable	IM	Most*

The following basic considerations must be remembered in the treatment of sick birds:

1. Handling should be limited to reduce stress. All medications must be prepared prior to handling.
2. Water medications are useful in the treatment of flocks and mild infections but

should not be relied on for very ill birds, which consume less water than healthy birds.

3. Warmth increases water consumption. Fruits should be limited but not eliminated when using water medication. They are often the only food consumed by a sick bird.

4. When bactericidal drugs are used in the treatment of mild or localized infections, the maintenance of constant therapeutic blood levels may not be required. For example, one daily dose of gentamicin is effective in many clinical cases.

Dosage	Frequency & Duration	Comments
15-20 mg/kg	q 12 or 24 hr	For <i>Pseudomonas</i> or other gram-negative bacterial infections that are resistant to gentamicin. Available products are too concentrated for use in birds & should be diluted. Broad-spectrum antibiotic, excellent for gram-negative infections. Can be used for all indications & by all routes listed for gentamicin. Polyuria, which occurs with gentamicin, is generally absent when amikacin is used.
150-175 mg/kg	q 8 or 12 hr	Most preparations are palatable & well accepted. Many require refrigeration & expire rapidly.
150-200 mg/kg	q 8 or 12 hr	Ampicillin is poorly absorbed & rapidly excreted by the kidneys. Poor efficacy against many gram-negative pathogens of pet birds.
100 mg/kg	q 4 hr	This dose is required for the maintenance of therapeutic blood levels in septicemias & other serious disorders.
50 mg/kg	q 6 or 8 hr	For more sensitive organisms or localized infections.
1.65 g/L		
250 mg/8 oz	5-10 days	
100-200 mg/kg	q 8 or 12 hr	Retains potency for only 3 days after reconstitution if refrigerated. Synergistic with gentamicin; however, they must not be mixed.
100 mg/kg	q 24 hr	For use with IM gentamicin in pneumonias due to <i>Pseudomonas</i> . Short half-life; if used alone may require more frequent administration.
50-100 mg/kg	q 8 hr	Broad-spectrum drug with low toxicity. May be used in conjunction with aminoglycosides; however, nephrotoxicity may occur.
35-50 mg/kg	q 6-8 hr	Most preparations are palatable & well accepted.
100 mg/kg	q 6-8 hr	Not absorbed from the GI tract.

TABLE 1. ANTIBIOTICS FOR BIRD DISEASES (Continued)

Drug	Form	Route	Species
Chloramphenicol	Succinate, injectable, 100 mg/ml	IM	Most
		IV	Most
	Palmitate, oral suspension, 30 mg/ml	PO	Turkey*
Chlortetracycline			Psittacines
	Soybean meal base, 200 g/kg or soluble powder	Food	Large psittacines
	Capsules or soluble powder	Food	Lories, lorikeets
	Pelleted feeds	Food	Large psittacines
	Impregnated millet	Food	Small psittacines, finches
	Capsules	Water	Most
	Soluble powder, 55 g/kg	Water	Most
Doxycycline	Oral suspension	PO	Psittacines
	Syrup, 10 mg/ml	PO	Psittacines
	Injectable, 10 mg/ml	IV	Psittacines
	Capsules, 100 mg	Food	Psittacines
	Soluble powder	Water	Most
	Injectable	Nebulization	Most
Erythromycin	Oral suspension	PO	Psittacines

Dosage	Frequency & Duration	Comments
80 mg/kg	q 8 or 12 hr	Lower dosage for IV succinate form. Excretion of IV chloramphenicol succinate is very rapid. IV chloramphenicol may be required, however, in the initial treatment of bacterial septicemias.
50 mg/kg	q 6 or 8 hr	
50 mg/kg	q 6 hr	Absorption is erratic; should not be used for initial therapy in life-threatening infections.
0.1 mg/30 g 1.0 ml/300 g	q 8 or 12 hr q 8 or 12 hr	Well accepted. Very useful for therapy in hand-feeding birds. If crop stasis occurs, parenteral antibiotics must be used.
100 g/10 kg mash*	Only food source for 30-45 days	For treatment of chlamydiosis. Prepare mash by cooking rice &/or corn in water until soft. Cool immediately & add chlortetracycline. Brown sugar may be added in equal volumes to chlortetracycline. Must be prepared fresh daily.
5 g chlortetracycline/L 0.5%*		For use in nectar & food. Rice or commercial chicken feeds may be added.
1% chlortetracycline*	Only food source for 30-45 days	Well accepted by many medium & large psittacines. Some birds, especially macaws, may require mixture with other medicated foods. Antifungal additives reduce fungal overgrowth.
0.5% chlortetracycline*	Only food source for 30 days	Excellent for budgerigars & cockatiels. May be inadequate for lovebirds.
250 mg/pint		Tetracycline breakdown is rapid in water. Solution should be changed q 8 or 12 hr. Candidiasis is common following long-term use of tetracyclines.
1/4-1 tsp/L		
16-20 mg/kg	q 12 hr	Drug of choice for chlamydiosis. Less fungal overgrowth & flora disturbance than with chlortetracycline.
16-20 mg/kg	q 12 hr	Sensitive to iron & calcium in diet.
20-40 mg/kg	Once or twice	For initial therapy in severe cases of chlamydiosis. Toxicity & muscle necrosis may occur with IM administration.
100 mg/kg		Mix 3 capsules doxycycline & 1/16 tsp gentian violet powder with 2 L cooked corn. Combine with equal volume of parrot mix.
125 mg/L	10 days on, 5 days off, 10 days on	For chronic respiratory disease, air sacculitis, mild sinusitis, & mild enteric infections.
1 ml/10 ml saline	15 min q 8 hr	For air sacculitis & chronic respiratory disease. Injectable solution should not be used IM due to severe muscle irritation.
40-80 mg/kg	q 12 hr for 5-10 days	

TABLE 1. ANTIBIOTICS FOR BIRD DISEASES (Continued)

Drug	Form	Route	Species
Gentamicin	Injectable aqueous solution, 50 mg/ml	IM	Pheasants, cranes*
			Quail*
			African gray parrot*
			Blue & gold macaw*
		PO	Most
		Water	Most
		Nebulization	Most
		Intratracheal	Most
		IV	Most
		Ophthalmic solution	Most
		Powder, 2 g/30 g	Most
Kanamycin	Injectable, 50 mg/ml	IM	Most
			Most, especially finches
		Water	Most
Lincomycin	Suspension, 50 mg/ml	PO	Budgerigar
			Amazon parrots
			Raptors
Lincomycin & spectinomycin	Soluble powder, 16.7 g lincomycin & 33.3 g spectinomycin/2.55 oz	Water	Most
Neomycin	Solution with methsopolamine bromide	Water	Most

Dosage	Frequency & Duration	Comments
5 mg/kg	q 8 hr for 5-10 days	These dosages maintain therapeutic blood levels as required for septicemias & other serious infections. In less serious infections, dosage q 12 or 24 hr is clinically very effective because of the bactericidal effect of gentamicin. May produce transient polyuria that returns to normal with the cessation of therapy.
10 mg/kg	q 6 hr	
10 mg/kg	q 8 hr	
10 mg/kg		The above dosages do not exceed blood levels of 12 µg/ml, which is the mammalian nephrotoxic level. This dosage produces therapeutic blood levels for 12 hr; however, the mammalian nephrotoxic level is greatly exceeded initially. The avian nephrotoxic level has not been determined. This dosage given q 24 hr has been used successfully in hundreds of clinical cases.
40 mg/kg	q 8, 12, or 24 hr for 2-3 days	For sterilization of the gut or treatment of infections confined to the gut. Gentamicin is not absorbed across intact mucosa.*
0.25-1.25 mL/L	2-3 days	
1 mL/10 mL saline	15 min q 8 hr	
5-10 mg/kg	q 24 hr	Useful in pneumonias in conjunction with carbenicillin or tylosin.
5-10 mg/kg	Once	For initial therapy in life-threatening infections.
Several drops in each nostril	q 8, 12, or 24 hr	For sinusitis & pharyngitis.
1/8 tsp/gal	3 days	For infections confined to the gut.
10 mg/kg	q 12 hr	For infections confined to the gut. Good for use immediately prior to or after known stressful conditions (such as shipping). Reduces the number of potential pathogens that could proliferate in the stressed bird.
1-5 mL/gal	3 days	
1 drop	q 12-24 hr for 7-14 days	
0.5 mL/300 g	q 12-24 hr for 7-14 days	
1 mL/300 g	q 12-24 hr for 7-14 days	
100 mg/kg	q 12-24 hr for 7-14 days	
1/8-1/4 level tsp/pint	2-4 wk	Sugar may be added to improve acceptance. For use in mild enteric & respiratory diseases.
1-8 drops/oz	1-3 days	Contains an anticholinergic; care must be taken not to overdose.

TABLE 1. ANTIBIOTICS FOR BIRD DISEASES (Continued)

Drug	Form	Route	Species
Nitrofurazone	Soluble powder, 9.3%	Water	Most Mynahs, lories, & lorikeets
Oxytetracycline (long-acting)	Injectable	IM	Most
Procaine penicillin G & benzathine penicillin	Injectable	IM	Turkey*
Spectinomycin	Water-soluble solution	Water	Most
Streptomycin	Injectable	IM	Large birds
Sulfachlorpyridazine	Soluble powder	Water	Most
Sulfadimethoxine	Oral suspension, 100 mg/ml	PO	Most
Sulfamethazine	Solution, 30 mg/oz	PO	Small pet birds
Tetracycline	Soluble powder, 10 g/6.4 oz Oral suspension	Water PO or by gavage	Most Psittacines
Ticarcillin	Injectable	IV or IM	Most
Tobramycin	Injectable, 80 mg/2 ml	IM	Most
Trimethoprim-sulfamethoxazole	Oral suspension, 40 mg trimethoprim & 200 mg sulfamethoxazole/5 ml	PO	Most*
Tylosin	Injectable, 50 mg/ml or 200 mg/ml	IM	Most*
	Soluble powder with vitamins, 250 g/8.81 oz	Water	Most

Dosage	Frequency & Duration	Comments
1/4 tsp/L	7-10 days	Excellent for the treatment of gram-negative enteric infections. Slows the flock spread of salmonellosis. Effective for many strains of coccidia in psittacines but not very effective in mynahs & toucans. Toxic in overdose, resulting in neurologic signs &/or death, especially in mynahs, lories, & lorikeets.
1/8 tsp/L; do not put in nectar	7-10 days	
200 mg/kg	q 24 hr for 3-5 days	For initial treatment of chlamydiosis while converting to medicated diet.
* 100 mg/kg of each drug	q 24 hr or q 2 days	Provides therapeutic blood levels for 1-2 days. Procaine penicillin must not be used in the treatment of small birds because of its potential toxicity.
5 mL/L	5-10 days	For gram-negative enteric infections. Good for flock treatment.
30 mg/kg	q 8 or 12 hr	Should not be used in pet birds due to potential toxicity. Used extensively in poultry.
1/4 tsp/L	5-10 days	Effective for many <i>Escherichia coli</i> enteric infections.
0.01 ml/30 g, 0.2 mL/kg	q 12 hr	May produce nausea & vomiting.
Full strength	Instead of water	For coccidiosis & mild respiratory & enteric infections.
1/4 tsp/L	5-10 days	Must be changed q 8 or 12 hr.
75 mg/300 g	q 24 hr	For changing ill birds to mash or pelleted feeds when gavage feeding is required. Inadequate for long-term treatment of chlamydiosis.
200 mg/kg	q 6, 8, or 12 hr	More effective than carbenicillin against <i>Pseudomonas</i> . Nontoxic & synergistic with aminoglycosides.
Dose as gentamicin		For strains of <i>Pseudomonas</i> resistant to gentamicin.
2 mL/kg	q 12 hr the first day and q 12-24 hr thereafter for 5-10 days	For enteric bacterial infections, mild respiratory infections, & coccidiosis.
2 mL/kg	5 days	Place on top of moist food for treatment of coccidiosis. Well accepted.
10-40 mg/kg	q 8 or 12 hr	Good in initial therapy of upper respiratory infections & air sacculitis, especially if <i>Mycoplasma</i> infection is suspected.
1/2 tsp/L	10 days on, 5 days off, 10 days on	May be poorly accepted due to bitter taste. Dosage may be divided between food & water. For treatment of chronic respiratory disease & air sacculitis, especially if <i>Mycoplasma</i> infection is suspected.

TABLE 1. ANTIBIOTICS FOR BIRD DISEASES (Continued)

Drug	Form	Route	Species
Tylosin (Continued)	Soluble powder with vitamins, 250 g/8.81 oz (Continued)	Eye spray	Cockatiels, others

* Dosages in species marked with an asterisk were established by blood value determination.

TABLE 2. ANTIFUNGALS FOR BIRD DISEASES

Drug	Form	Route	Species
Amphotericin B	Injectable, 50-mg vial	IV	Raptors, psittacines
		Intra-tracheal	Raptors, psittacines
		Nebulization	Raptors, psittacines
	Lotion, 3%	PO, topical application	Psittacines
Chlorhexidine	2% solution	Water	Psittacines
Flucytosine	Capsules, 250 mg	Gavage	Psittacines
			Raptors
		Food	Mynahs, psittacines
Gentian violet	Powder	Food	Psittacines
Ketoconazole	Tablets, 200 mg	Gavage	Psittacines
		Water	Most
		Food	Most
Nystatin	Oral suspension, 100,000 U/ml	PO	Most
	Feed, premix in diatomaceous earth base	Food	Most

Dosage	Frequency & Duration	Comments
Mix with water, 1:10	q 8, 12, or 24 hr	For the flock or individual treatment of conjunctivitis. Allows frequent treatment without handling. May be used in conjunction with tylosin in water or tetracycline in feed.

Dosage	Frequency & Duration	Comments
1.5 mg/kg	q 8 hr for 3 days	For treatment of aspergillosis; use for 3 days in conjunction with or followed by flucytosine therapy. Potentially nephrotoxic & can cause bone marrow suppression.
1 mg/kg		Dilute to 2 ml with sterile water.
1 mg/ml sterile saline	15 min q 12 hr	
	q 24 hr	Apply to oral lesions of candidiasis that are refractory to nystatin. Not absorbed from the intestine.
2.5 mL	5-10 days	For flock or individual treatment of candidiasis. Slows spread of some viral diseases (e.g., avian herpesvirus) through a flock. This may be due to viricidal action in water or in gut.
250 mg/kg	q 12 hr	Use by gavage, mixed with food, or mix with a favorite soft food. This dosage can be used safely for extended periods.
120 mg/kg	q 8 hr	Fungicidal at this level.
200-500 mg/kg feed		For flock treatment of aspergillosis.
0.5-1.0 g/kg feed	7-45 days	For treatment of candidiasis or inhibition of <i>Candida</i> overgrowth during chlortetracycline therapy. To inhibit fungal overgrowth in feed.
5-10 mg/kg	q 12 hr for 14 days	For severe refractory candidiasis. For local effect in the crop, dissolve 1/4 tablet in 0.2 ml 1N hydrochloric acid & 0.8 ml water. Mixture is added to food for gavage.
200 mg/L	7-14 days	Drug is not water soluble & will sink or float. Dissolve in acid before adding to water.
10-20 mg/kg	7-14 days	Apply to favorite food or add to mash.
1 ml/300 g	q 12 or 24 hr	Well accepted. Useful for treatment of candidiasis, after antibiotic therapy, & in hand-feeding birds.
2-4 Tbs/5 kg feed	7-14 days	Do not use in conjunction with tetracycline, as calcium content may interfere with absorption.

TABLE 3. ANTHELMINTICS FOR BIRD DISEASES

Drug	Form	Route	Species
Amprolium	9.6% solution	Water	Most
Carbaryl	Dust, 5%	Dusting	Most
Dimetridazole	Soluble powder, 182 g/6.42 oz	Water	Most Mynahs, lories
Iprnidazole	Soluble powder, 61 g/2.65 oz	Water	Most Budgerigar
Ivermectin	Injectable, 10 mg/ml	IM or PO	Most
Levamisole	Injectable, 13.65%	Water	Most
	Injectable, 13.65%	Gavage	Australian parakeets
Mebendazole	Powder	IM or SC	Most
		Gavage or food	Psittacines
Metronidazole	Tablets, 125 mg	Pill	Pigeons
Niclosanide	Tablets	Gavage or food	Most
Praziquantel	Tablets	Gavage, PO or food	Most
Pyrantel pamoate	Suspension	PO	Most
Pyrethrins	Spray	Topical	Most

Dosage	Frequency & Duration	Comments
0.5 mL/L	5 days or longer	For treatment of coccidiosis. To prevent reinfection, cage must be cleaned with steam, & wooden portions must be replaced. B vitamins should be supplemented. Some strains in soft-bills are resistant.
Cover bird with light dust or add 1 tsp to a cockatiel nest box	Once, repeat as needed	For treatment of ectoparasitism. Nontoxic.
1/4 tsp/L	5 days only	May be toxic if this dosage is exceeded. For trichomoniasis, giardiasis, & histomoniasis. Do not treat flock during breeding because the male may overdose through its feeding of the hen on the nest. Toxic to pekin robins.
1/8 tsp/L	5 days only	
1.5 g/pint water, give 0.5 mL/30 g	3 doses at 12-hr intervals	For birds that fail to drink adequate amounts of water.
125 mg/L	7 days	For giardiasis, histomoniasis, & trichomoniasis.
200 µg/kg	Once, repeat in 10-14 days	Effective for intestinal nematodes, <i>Oxyuris</i> , & gapeworms. Drug of choice for <i>Knemidokoptes</i> infestation. Bovine preparation should be diluted 1:4 with propylene glycol & dosed at 0.1 mg/kg. Budgerigar dose, 0.01 mL.
1.25-2.5 mL/L	1-3 days	Effective for most nematodes. Repeat in 10 days. Breeding birds should be treated twice a year.
15 mg/kg		For treatment of individual birds or species that fail to drink water (many desert species may refuse water for several days).
8 mg/kg		Do not use in lories or in debilitated birds.
25 mg/kg	q 12 hr for 5 days	For <i>Capillaria</i> .
1/6 tablet	5 days	For trichomoniasis.
200 mg/kg		For treatment of tapeworms. Ground tablets are not water soluble; must make a suspension for gavage treatment. May be sprinkled on top of soft food for lories, mynahs, & toucans. May pill waterfowl.
1/4 tablet/kg	Once, repeat in 10-14 days	For tapeworms. Injectable form is potentially toxic.
4.5 mg/kg	Once, repeat in 10-14 days	For intestinal nematodes. Nontoxic & palatable.
Lightly mist feathers	Repeat as necessary	For ectoparasites, especially lice, which are resistant to carbaryl. When treating lice spray must be applied in axillary area with wing extended.