

Summarized from *Koi Health and Disease*, by Erik L. Johnson, DVM

This material was excerpted by Spike Cover and if it's messed up, it's his fault <grin>

**CAUTION**

Trade Name generic name Strength Injection Route(s) Dosing: See notes	Total Fish Length <sup>11</sup>											
	Amikacin <sup>1</sup> 40-50 mg/ml IP or IM 1	Sterile Saline <sup>2</sup> added to Amikacin for IP injections 2	Azactam <sup>3</sup> azteronam 100 mg/ml IP 3	Baytril <sup>4</sup> enrofloxacin 2.27% IP 4	Cefotan <sup>5</sup> cefotetan 100 mg/ml IP 5	Chloramphenicol <sup>6</sup> 100 mg/ml IP (not IM) 6	Dexamethasone <sup>7</sup> 2mg/ml IP 7	Gentamicin <sup>1</sup> <b>See note 12</b> 40-50 mg/ml IM or IP <sup>12</sup> 1	Nexcel <sup>8</sup> ceftiofur 50 mg/ml IP or IM 8	Nuflor <sup>9</sup> florencicol 300 mg/ml IM and IP 9	Rocephin <sup>10</sup> ceftriaxone 50mg/ml IP or IM 10	
6"	0.1	0.4	0.1	0.1	0.3	0.3	0.1	0.1	0.3	0.3	0.5	
10"	0.3	0.7	0.2	0.3	0.8	0.8	0.3	0.3	0.8	0.8	1.0	
14"	0.5	1.5	0.4	0.6	1.0	1.0	0.5	0.5	1.0	1.0	1.5	
18"	0.7	1.3	0.6	0.9	1.5	1.5	0.7	0.7	1.5	1.5	2.0	
22"	1.0	2.0	0.8	1.0	2.0	2.0	1.0	1.0	2.0	2.0	2.5	
24"							2.0					
26"	1.5	2.5	1.0	1.25	2.8	2.8	1.5	1.5	2.75	2.8	3.0	
30"	2.0	4.0	1.5	1.75	3.5	3.5	2.0	2.0	3.5	3.5	3.5	
34"	3.0	5.0	1.5	2.0	4.0	4.0	3.0	3.0	4.0	4.0	4.0	

Weight based dosing Route	5 mg/kg IP	14 mg/kg IP	25 mg/kg IP	3 mg/kg IP <sup>13</sup>
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**Notes:**

- 1 Amikacin - Inject every other day (EOD) for no more than 3 injections, specifically avoiding the use of Gentamicin; if fish show any signs of spasticity, stop injections immediately and avoid stressing the fish. **Also see note 12.**
- 2 Sterile saline added to Amikacin when given IP to aid the dispersion of the drug thru the peritoneal space
- 3 Azactam - inject daily for 3 days, then EOD for 3 more injections. Reconstitute with sterile saline (0.9% salt). Keeps for 7 to 14 days under refrigeration after reconstituting. Very effective against Pseudomonas.
- 4 Baytril - given IP with 25 ga needle. Inject daily for 3 injections, then EOD for 2 more injections. Effective against Pseudomonas.
- 5 Cefotan - Inject daily for 3 injections, then EOD for 3 more injections. Reconstituted med good for 4 days if kept refrigerated, only 1 day if at room temp.
- 6 Chloramphenicol - Inject daily for 3 injections, then EOD for 3 more injections. **CAUTION - Chloramphenicol can cause Grays Syndrome in humans.** Reconstituted drug starts to lose potency after 7 to 14 days if not refrigerated. ELJ implies that reconstituted Chloramphenicol can be kept by freezing.
- 7 Dexamethasone - given to fish in sever shock. Not an antibiotic. See p. 68 of *Koi Health and Disease* for indications for use.
- 8 Nexcel - very forgiving in both in both dose and interval. IP preferred route. Inject daily or EOD for 3 to 5 injections. Store reconstituted drug up to one month under refrigeration.
- 9 Nuflor - ELJ initially used IM injections but now says IP works well. Some large kohaku have turned bright red post IM injection and the speculation is that it was the result of sun sensitivity due to the antibiotic. Best given with 20 ga needle (medication is very viscous).
- 10 Rocephin - same dosing regimen as Chloramphenicol - see Note 6 above.
- 11 Fish length includes the tail, i.e., it is the total length of the fish (this does not apply to long-finned koi or butterfly koi)
- 12 **Gentamicin has been found to be frequently VERY toxic especially when given IP. Information on ELJ's web page says (as of 1-1-05), " Never use Gentamicin. It's toxic in a dose or two."**
- 13 This dosing of Gentamicin is far less than the dosing recommended by ELJ based on length. Professional and amateur fish fixers report better results from IM and/or lower dosing

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**Injectible Meds**

Names				
Generic	Trade	Recommended dosing		Route(s)
Amikacin		5mg/kg every 72 hours (q72h)		IM, IP
Azteronam	Azactam	100mg/kg every 2 to 5 days		IM, IP
Ceftazdime	Fortaz	20mg/kg	q72hr	IM
Chloramphenicol		25-50mg/kg q3-7days		IM, IP
Dexamethasone		1-2 mg/kg	q12h	IM, IP
Enrofloxacin	Baytril	10-14mg/kg q48h		IM, IP or PO, q24hr
Florphenacol	Nuflor	25-50mg/kg q24-72hr		IM, IP, PO
Gentamicin		3mg/kg	once only	IM

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Abbreviation	Meaning
EOD	every other day
h	hour(s)
IM	Intramuscular
IP	Intraperitoneal (actually intracoelomic in fish)
kg	kilograms
mg	miligrams
PO	Per Os (by mouth)
q	every