Commonly Used Antibiotics for Canine Pyoderma[1]

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Antibiotic	Dose	Drug Class	Mechanism of Action
AMINOPENICILLINS			
Amoxicillin/ (Clavulanate)	13.75 to 22 mg/kg PO Q 8 to 12 H	• Beta-lactam antibiotic • Potentiated aminopenicillin	• Amoxicillin: Usually bactericidal; inhibits bacterial cell wall synthesis • Clavulanic acid: Acts by binding to beta-lactamases and penicillinases produced by *Staphylococcus*
CEPHALOSPORINS			
Cefadroxil	22 mg/kg PO Q 12 H	• Beta-lactam antibiotic • First-generation cephalosporin	• Usually bactericidal • Inhibits bacterial cell wall synthesis • Unlike other third-generation cephalosporins, cefpodoxime and cefovecin are NOT effective against *Pseudomonas*
Cephalexin	22 to 30 mg/kg PO Q 8 to 12 H		
Cefpodoxime	5 to 10 mg/kg PO Q 24 H	• Beta-lactam antibiotic • Third-generation cephalosporin	
Cefovecin	• One 8 mg/kg SC injection • Second injection (8 mg/kg SC) may be administered if: ~ **For *S pseudintermedius*** infections that do not respond to therapy within 7 days ~ **For *S canis* (Group G)** infections that do not respond to therapy within 14 days • Maximum treatment should not exceed 2 injections[2]		
FLUOROQUINOLONES			
Enrofloxacin	5 to 20 mg/kg PO Q 24 H (10 mg/kg or higher preferred)[3]	• Fluoroquinolone	• Bactericidal • Inhibits bacterial DNA gyrase • Prevents bacterial DNA synthesis
Marbofloxacin	2.75 to 5.5 mg/kg PO Q 24 H		
Orbifloxacin	2.75 to 5.5 mg/kg PO Q 24 H		
LINCOSAMIDES			
Clindamycin	5 to 11 mg/kg PO Q 12 H	• Lincosamide	• Bacteriostatic or bactericidal, depending on drug concentration and organism • Binds to 50S ribosomal subunit of susceptible bacteria and inhibits protein synthesis
Lincomycin	15.4 mg/kg PO Q 8 H ***or*** 22 mg/kg PO Q 12 H		
SULFONAMIDES			
Sulfadimethoxine/ Ormetoprim	55 mg/kg PO on day 1; then 27.5 mg/kg PO Q 24 H	• Potentiated sulfonamide	• Bactericidal by sequentially inhibiting: ~ Enzymes in the folic acid pathway ~ Bacterial thymidine synthesis
Trimethoprim/ Sulfamethoxazole	30 mg/kg PO Q 12 to 24 H ***or*** 15 mg/kg PO Q 12 H		

References

1. Plumb DC (ed). *Plumb's Veterinary Handbook*, 7th ed. Ames, IA: Wiley-Blackwell Publishing, 2011.
2. Information from Convenia label information (pfizerah.com).
3. Aucoin DP. *Proc Fourth Intl Baytril Symp*, 2009, pp 6-15.

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