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| **General Information** | Drugs can target:  a. the extracellular stages (sporozoites, merozoites) to prevent penetration of cells  b. the intracellular stages to stop development,  c. affect the sporulation of oocysts after excretion,  d affect excystation, and  e. arrest development (coccidiostatic)  f. kill coccidial stages (coccidiocidal)  Resistance to anticoccidial drugs is a major concern to the poultry industry |

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| **Name Of Drug** | **Mechanism of Action** | **Parasite it affects** | **Dose** | **Contraindications and Side effects** | **Route of Administration** | **Other Information** |
| Sulfonamides |  | Coccidia |  | Sulfachloropyrazine = chickens, (not laying hens); turkeys, cattle, sheep; WDT = 10 days 26  Sulfadimethoxine = chickens (not laying hens); WDT = 4 days  Sulfamethazine = chickens (not laying hens), turkeys; WDT = 5 days  Sulfanitran = chickens (not laying hens), turkeys, cattle; WDT = 10 days  Sulfaquinoxaline chickens (not laying hens), WDT = 5 days | Oral | Similar in structure to PABA and they inhibit folic acid synthesis by competitively inhibiting the bacterial enzyme dihydropteroate synthetase that catalyzes the formation of dihydropteroate from PABA  Mammalian and avian species use preformed folate and are therefore less sensitive to sulfonamides  Effective against asexual stages and not the sexual stages  Do not impair immunity development |
| Hydroxyquinolones and Naphthoquinoones | Coccidiostatic | Coccidia |  |  |  |  |
| Decoquinate | May block DNA synthesis by inhibiting DNA gyrase  The quinolone anticoccidials (e.g., Parvaquone) are thought to inhibit transfer of electrons from ubiquinone to cytochrome **c** during electron transport in the parasites' mitochondria | Coccidia in calves, beef and non-lactating cattle, sheep, goats and poultry | Dogs:  Prophylaxis: 50 mg/kg PO once daily  Cattle:  Using the 6% premix: 0.5 mg/kg per day in feed for at least 28 days  Goats:  0.5 mg/kg per day in feed during periods of exposure | Decoquinate is not effective for treating clinical coccidiosis and has no efficacy against adult coccidia. Decoquinate is not approved for use  in animals producing milk for food or in laying chickens. | Oral | Poorly absorbed from the GIT and rapidly cleared  Decoquinate is reportedly incompatible with strong bases or  oxidizing material. Follow label storage directions; store in a cool, dry place. |
| Amprolium | Appears to competitively inhibit active transport of thiamine in isolated second generation schizonts of E. tenella  Prevent merozoite production and also affect sexual stages and the sporulating oocyst | Coccidia in layers | Dogs:  100 - 200 mg/kg PO in food or water for 7-10 days.  Cattle:  Treatment: 10 mg/kg PO for 5 days; 5 mg/kg for 21 days for prophylaxis  Swine:  Treatment: 25 - 65 mg/kg PO once or twice daily for 3-4 days.  Sheep and Goats:  Lambs: 55 mg/kg daily PO for 19 days.  Birds:  -For coccidiosis in pet birds: 2 ml (using the 9.6% solution)/gallon of water for 5 days or longer. Cages should be steam cleaned to prevent reinfection. Supplement diet with B vitamins. | Overdose can result in thiamine deficiency  Not recommended to be used for over 12 days in puppies | Oral | Structurally similar to thiamine, except that it lacks the Hydroxyethyl function of thiamine which prevents phosphorylation to a pyrophosphate analog.  It is the only anticoccidial approved for layers |
| Roxarsome |  |  |  |  |  | Arsenical drug is used primarily for its growth-promoting benefits, and is often used in combination with other drugs to enhance anticoccidial activity |
| Polyether Ionophores (monovalent, monovalent glycoside, divalent, divalent glycoside, divalent pyrole ethers) | Form lipophilic complexes with alkali metal cations and to transport these complexes across biological membranes.  The result is an increase influx of intracellular Na+ levels that exceeds the capacities of the 28  Na+/K+ pump to remove excess Na+. To maintain electro neutrality within the sporozoite, there is an increase in Cl- levels which then draws water into the cell and results in cellular swelling. |  |  |  |  | Different Ionophores have different affinities for different cations |
| Monensin (Coban®, Rumensin®) |  | Cattle, goats, and chickens coccidia |  | It should not be given to mature turkeys and guinea fowl. Chickens exposed to feed containing monensin + tiamulin can interfere with monensin metabolism and cause weight suppression.  The WDT can be 0 or 5 days depending on the other active ingredients in the formulation |  |  |
| Ponazuril |  | Sarcocystis neurona (Equine protozoal myeloencephalitis (EPM)) | Antiprotozoal Oral Paste is supplied in ready-to-use syringes containing 127 grams of paste to be used at a dose of 5 mg/kg (2.27 mg/lb) body weight once daily for a period of 28 days  Concentration of Ponazuril necessary to kill Sarcocystis neurona in vitro was 0.1 to 1.0 μg/mL. | The safety of this drug in pregnant or lactating mares has not been evaluated.  This drug should not be used in horses intended for food | Oral Paste |  |