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| **Name Of Drug** | **Mechanism of Action** | **Parasite it affects (lifecycle)** | **Dose** | **Contraindications and Side effects** | **Route of Administration** | **Other Information** |
| Dichlorvos | OPs phosphorylate the esteratic site of acetyl cholinesterase (ACHase), as a result ACHase cannot cleave ACH, and ACH accumulates at the post-synaptic membrane.  The organophosphate anthelmintic has selective toxicity to the ACHase of nematodes with little or no toxicity to the mammalian host.  Intoxication of the nematode results in a spastic paralysis, the nematode is then unable to maintain its station within the GIT and is removed by peristalsis. | Dogs and cats for the treatment of roundworms (Toxocara canis, Toxocara cati, Toxacaris leonina) and hookworms (Ancylostoma caninum, Ancylostoma tubaeforme, Uncinaria stenocephala). It is effective in swine against Ascaris, Trichuris, Ascarops strongylina and Oesophagostomum spp. In horses, dichlorvos is labelled as being effective for the treatment and control of bots, pinworms, large and small bloodworms and large roundworms. It is also used as a premise spray to keep fly populations controlled and as a flea and tick collar for dogs and cats. | Dogs:  26.4 - 33 mg/kg PO  Cats:  11 mg/kg PO | Signs of mammalian toxicity:  - Increased urination/defecation,  - Vomiting,  - Increased lacrimation,  - Salivation and  - Muscular twitching  Treatment of Toxicity  - Atropine or 2-PAM (pyradine-2-aldoxime)  - 2-PAM reactivates the esteratic site of ACHase  Contraindication  - Treatment with the same and different OP within a few days of the previous treatment. 16  - Concurrent use of muscle relaxants e.g. succinylcholine | Oral | Acepromazine or other phenothiazines should not be given within one month of worming with an organophosphate agent as their effects may be potentiated. Because of its anticholinesterase activity, avoid the use of organophosphates with DMSO. Cythioate could theoretically enhance the toxic effects of levamisole. Pyrantel Pamoate (or tartrate) adverse effects could be intensified if used concomitantly with an organophosphate. Patients receiving organophosphate anthelmintics should not receive succinylcholine or other depolarizing muscle relaxants for at least 48 hours. Drugs such as morphine, neostigmine, physostigmine and  pyridostigmine should be avoided when using organophosphates as they can inhibit cholinesterase. |
| Fenthion | Fenthion is topically administered organophosphate. Organophosphates act by  Inhibiting acetylcholinesterase, thereby interfering with neuromuscular transmission of susceptible parasites. | Fleas, lice | The labeled dose is: 4 - 8 mg/kg topically, not more often than once every two weeks. | Do not use on dogs less than 10 weeks of age or on stressed, sick or convalescing animals. Fenthion’s safety on breeding males or on pregnant females has not been established.  Do not treat calves less than 3 months old, or on stressed, sick or convalescing animals. Do not use in lactating animals. Do not treat cattle within 10 days of dehorning, shipping, weaning, or exposure to contagious or infectious disease. |  |  |