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## **COCCIDIA and GIARDIA**

**What are they?** They are both protozoa. A protozoa is not a worm or a bacteria or even a virus. It is a single celled parasite that can be mild with no issues to causing serious GI problems. In people, giardia is known as traveler's diarrhea and is often contracted from drinking contaminated water. Often dogs are silent carriers of BOTH these protozoa and you would never know it because the dog is healthy, and it just hangs out in the gut and gets passed in the feces and life goes on.....

These protozoa are very **HARDY** and live in the soil and feces (and in rodents like mice) **FOREVER AND EVER**. Probably **MANY** of **ALL** our adult dogs are carriers and we don't know it because dogs like to eat dead animals, and the poop of rodents and dig and eat soil. When these parasites become a problem are in the immature (puppies) and the immunocompromised (sick or older dogs). Since it lives in the soil all over the US, and in wild animals that exist and they carry it – it is a fact of life (unless you know how to clean the soil and get rid of every rodent and wild animal alive)!

Common signs that can happen in puppies are diarrhea, vomiting, etc... but signs are often mild unless severely affected and left untreated (like strays or shelter dogs). Good thing is though it is easy, simple and affordable to treat! Even if your dog or puppy tests positive they may have no signs at all. Simple treatment will fix it quickly. There are cases that are becoming refractive to treatment which is why it is important to treat correctly the first time and not under dose or for too few days (think antibiotic resistance).

### **COCCIDIA:**

Coccidia Treatments: Drugs such as sulfadimethoxine (Albon®) and trimethoprim-sulfadiazine (Tribrissen®) have been effective in the treatment and prevention of coccidia. Because these drugs do not kill the organisms, but rather inhibit their reproduction capabilities, elimination of coccidia from the intestine is not rapid. By stopping the ability of the protozoa to reproduce, time is allowed for the puppy's own immunity to develop and remove the organisms. Drug treatments of one to three weeks are usually required. This can be exhaustive for some people and animals as compliance wanes.

\*\*Newer and more rapid are drugs such as ponazuril or toltrazuril have been shown to be effective in eliminating coccidia in 1-5 doses. Ponazuril (Marquis paste) is FDA for approved for use in horses and can be used off label legally under AMDUCA. Toltrazuril is not FDA approved and is compounded. Marquis you purchase from your veterinarian. I am of the understanding but do not advocate that toltrazuril can be purchased online. I would highly advocate a reputable compounding pharmacy that is unfortunately not the one online ☹

I personally use Marquis paste (for horses) – this is ponazuril (this is NOT toltrazuril): One tube of equine paste contains 127 grams (4.5 oz.) at 150 mg/gm (19,050 mgs total per tube) which is a 15% solution. This tube is expensive - \$250ish dollars, but it lasts a very long time (for me 1-2 years). A recent study by Lister, et al found the use of oral ponazuril at 50 mg/kg once daily for 3 consecutive days for the treatment of coccidiosis in dogs and cats was highly effective. A 20 pound dog = 9 kg x 50 mg/kg = 454mg / 150 mg = 3 ml/cc

**MATH equation = 0.15 cc per pound of body weight (tiny amount)**

3 pounds is 0.45 cc (so approx ½ a cc on a 1 cc syringe)  
4 pounds is 0.6 cc  
5 pounds is 0.75 cc  
10 pounds = 1.5 cc  
15 pounds = 2.25 cc  
20 pounds = 3 cc  
25 pounds = 3.75 cc  
30 pounds = 4.5 cc

You will need to buy 1 and 3 cc syringes (pups) and 5-10 cc syringes (larger dogs), and squirt the horse paste into the smaller syringe to accurately measure and dose a puppy or dog.

### **GIARDIA:**

No drugs are approved for treatment of giardiasis in dogs and cats in the USA. Fenbendazole (50 mg/kg/day for 5-10 days in a row; usually 10 days) effectively removes Giardia cysts from the feces of dogs; no adverse effects are reported, and it is safe for pregnant and lactating animals. This was the same dose as posted in the fenbendazole post earlier using the horse paste dewormer conversions.

Metronidazole (extra-label at 25 mg/kg, bid for 5 days) is ~65% effective in eliminating Giardia spp from infected dogs but may be associated with acute development of anorexia and vomiting.

Metronidazole can be obtained from your veterinarian and fenbendazole is sold OTC as Panacur and Safeguard.

My favorite is a combo: administer both fenbendazole and metronidazole together for 5 days, being sure to bathe the dogs to remove cysts. **DO NOT FORGET TO BATHE YOUR DOG.** If clinical disease still persists and cyst shedding continues, the combination therapy should be extended for another 5-10 days.

A new drug not FDA approved in any animal is called secnidazole. This will require a prescription from your veterinarian; it will come from a compounding pharmacy. It may have a shorter duration but there is no available data in dogs.

### **REGARDING FENBENDAZOLE:**

For those of you who may be like me and hate the liquid fenbendazole because it is messy (and I end up covered or dripping down my arms)... I use the horse paste. Brand I use is Panacur (comes in a blue tube) and is at farm stores for horses.

Fenbendazole horse paste in dogs: There is 25 cc in one tube of 25 gram paste 10% (100 mg/g). The dose for dogs is 50 mg/kg. So after all the math calculations..... it is basically 0.25 cc per pound of pup/dog. You will need to buy 3 cc syringes and squirt the horse paste into the smaller syringe to accurately dose a puppy or dog.

### **A brief chart:**

3 pounds = 0.75 cc
4 pounds = 1 cc
5 pounds = 1.25 cc
10 pounds = 2.5 cc

15 pounds = 3.75 cc
20 pounds = 5 cc
25 pounds = 6.25 cc
30 pounds = 7.5 cc