

Hookworms and Racing Greyhounds

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In the past few years, the greyhound community has been recognizing an increasing problem with persistent hookworms. The issue was initially noticed by adoption groups as the majority of retiring greyhounds from Florida started arriving with hookworms, despite routine deworming at racing kennels, and some were getting sick with GI signs. The stress of the transportation and transition from track to home life likely resulted in the onset of clinical signs and increased worm burden in dogs that were asymptomatic in the stable, familiar environment of the track.

Hookworms can be difficult to completely clear because of a phenomenon called larval leak. Some of the immature larva go dormant in the tissues outside the intestinal tract. Those larva can stay inactive for long periods of time, and they often don't become active again until the number of worms in the intestines drop. So when the dog is dewormed, those dormant larva re-emerge and re-infest the intestines, and the whole cycle starts over again. Because the hookworm life cycle takes 2-3 weeks to complete, the way to treat larval leak is to deworm every 2 weeks.

In addition to larval leak, it seems that some of the hookworms are also becoming resistant to the common dewormers. Racing greyhound breeders in Florida began to notice problems with hookworms even while deworming puppies with the standard, veterinarian-recommended products and protocols. This suspected combination of larval leak and possible resistance can make it very difficult to eliminate hookworm infestations.

Treatment

After trying various combinations of dewormers and protocols over the past 2-3 years, I have had good results with using **monthly Advantage Multi, along with a standard dewormer given in the middle of the month between doses of Advantage Multi**. For the standard dewormer, I usually use Drontal Plus (or compounded equivalent), or a 5-day course of Panacur (fenbendazole) with a dose of pyrantel pamoate given on the last day. I add the pyrantel for added effect because it works synergistically with fenbendazole. For dogs that are asymptomatic for the hookworms, I will often just treat with monthly Advantage Multi and only add another dewormer if the dog develops diarrhea or other GI signs.

Even with an effective protocol, because of larval leak, it can take 6-8 months or more before the hookworm infestation can be fully eliminated. Often, even getting one or two negative fecal flotation results doesn't mean the dog is clear. I usually recommend continuing monthly Advantage Multi until a minimum of 2-3 negative results on fecals done several weeks apart. The IDEXX fecal antigen test may be more accurate, but it would still be prudent to continue Advantage Multi for a few more months past a negative result.

**A note on a couple other hookworm treatment protocols that have been shared and discussed on various groups. I would not recommend using Advantage Multi every 2 weeks as described in what is called the "prison protocol". With monthly administration of Advantage Multi, the active ingredient of moxidectin reaches steady state in the bloodstream after the 3rd dose. Steady state means that there is an effective level of the medication in the blood constantly, so it provides continuous deworming activity, and there is no need to administer it more frequently. Using Advantage Multi every 2 weeks, especially for an extended period of time, will result in blood levels of moxidectin that are significantly higher than what has been proven to be safe in the product approval studies.

There are also some people who advocate the use of the horse dewormers Quest or Quest Plus, which contain moxidectin, the same active ingredient as Advantage Multi. While I understand the practical need for this when managing large populations of dogs, such as on greyhound farms or racing kennels, I would not recommend this for pet greyhounds. There is no established oral dose of moxidectin in dogs, so we do not know what is safe and effective for hookworms. Sticking with the approved product, Advantage Multi, is preferable.