WHAT ARE HOOKWORMS?
Hookworms are a common intestinal parasite found in dogs. This tiny parasite sucks large amounts of blood from the pet. Dogs may become infected in one of the following ways:

- Dogs can ingest immature parasites (called larvae) in contaminated soil or water
- Dogs eat tissues from an infected animal
- Larvae can penetrate a dog’s skin
- Larvae can infect young pups via their mother’s milk

HOW DO I KNOW IF MY DOG HAS HOOKWORMS?
Checking a pet’s stool for parasites is an important part of veterinary care. Diagnosis is made by finding the eggs in feces. Microscopic examination of the stool will identify the species of hookworm present.

ARE HOOKWORM INFECTIONS SERIOUS?
Because hookworms feed on blood, they may cause anemia, stunted growth in young animals, dull and dry haircoat, diarrhea, or weakness.

HOW IS HOOKWORM INFECTION TREATED?
Safe and effective dewormers are available to treat your dog for hookworms. Treatment will need to be repeated in 2 to 4 weeks since these drugs kill only adult hookworms and not any migrating larvae. Any feces in the yard should be picked up daily to help prevent reinfection.

CAN HOOKWORMS AFFECT PEOPLE?
Hookworm larvae can penetrate a person’s skin (usually bare feet) and migrate. This disease is called “cutaneous larva migrans.” Lesions appear as a red line beneath the skin and may cause severe itching. Occasionally, larvae may make their way through the skin and enter deeper tissues, causing lung disease or muscle pain and inflammation.

Your veterinarian can discuss the risks of hookworms to your dog and preventive measures to help avoid it. Regular examination of your dog’s feces and treatment with a dewormer will help protect your dog’s health and help prevent the spread of hookworm.

Talk with your veterinarian about how Drontal® Plus (praziquantel/pyrantel pamoate/febantel) can help protect your dog from a wide range of intestinal parasites.

Rash typical of cutaneous larva migrans.
**Drontal® Plus**

*(praziquantel/pyrantel pamoate/febantel)*

**Tablets**

**Broad Spectrum Anthelmintic for Dogs**

**DESCRIPTION:** Drontal® Plus (praziquantel/pyrantel pamoate/febantel) Broad Spectrum Anthelmintic Tablets are available in three sizes. Each size is scored for convenient oral administration.

Each Drontal® Plus Tablet for Puppies and Small Dogs contains 22.7 mg praziquantel, 22.7 mg pyrantel base as pyrantel pamoate, and 60.4 mg febantel.

Each Drontal® Plus Tablet for Medium Sized Dogs contains 68.0 mg praziquantel, 68.0 mg pyrantel base as pyrantel pamoate and 340.2 mg febantel.

Each Drontal® Plus Tablet for Large Dogs contains 136.0 mg praziquantel, 136.0 mg pyrantel base as pyrantel pamoate, and 680.4 mg febantel.

**ACTION:** Drontal® Plus Tablets contain three active ingredients having different modes of action and spectra of activity. Praziquantel is active against cestodes (tapeworms). Praziquantel is absorbed, metabolized in the liver and excreted in the bile. Upon entering the digestive tract from the bile, cestodal activity is exhibited. Following exposure to praziquantel, the tapeworm loses its ability to resist digestion by the mammalian host. Because of this, whole tapeworms, including the scolecites, are very rarely passed after administration of praziquantel. In many instances only disintegrated and partially digested pieces of tapeworms will be seen in the stool. The majority of tapeworms are digested and are not found in the feces.

Pyrantel pamoate is active against hookworms and ascariids. Pyrantel pamoate acts on the cholinergic receptors of the nematode resulting in spastic paralysis. Peristaltic action of the intestinal tract then leads to energy exchange breakdown and inhibited glucose uptake. Laboratory efficacy and clinical studies conducted with Drontal® Plus Tablets demonstrate that each of the three active ingredients act independently without interference. The combined tablet formulation provides a wide spectrum of activity against the indicated species of intestinal helminths.

**INDICATIONS:** Drontal® Plus (praziquantel/pyrantel pamoate/febantel) Broad Spectrum Anthelmintic Tablets are indicated for removal of Tapeworms (Dipylidium caninum, Taenia pisiformis, Echinococcus granulosus, and removal and control of Echinococcus multilocularis). For removal of Hookworms (Ancylostoma caninum, Uncinaria stenocephala), Ascaris (Toxocara canis, Toxascaris leonina), and Whipworms (Trichuris vulpis) in dogs.

**USE DIRECTIONS:**

**DOSAGE:** The presence of parasites should be confirmed by laboratory fecal examination. Weigh the animal before treatment. Administer the proper dosage as specified in the following table as a single oral treatment.

**DOSAGE CHARTS**

<table>
<thead>
<tr>
<th>Drontal® Plus Tablets for Puppies and Small Dogs*</th>
<th>Drontal® Plus Tablets for Medium Sized Dogs</th>
<th>Drontal® Plus Tablets for Large Dogs</th>
</tr>
</thead>
<tbody>
<tr>
<td>(2 - 25 lbs.)</td>
<td>(26 - 60 lbs.)</td>
<td>(45 lbs. and greater)</td>
</tr>
<tr>
<td><strong>Body Wt.</strong></td>
<td><strong>No. of Tablets</strong></td>
<td><strong>Body Wt.</strong></td>
</tr>
<tr>
<td>(lbs.)</td>
<td></td>
<td>(lbs.)</td>
</tr>
<tr>
<td>2 – 4</td>
<td>0.5</td>
<td>26 – 30</td>
</tr>
<tr>
<td>5 – 7</td>
<td>1.0</td>
<td>31 – 44</td>
</tr>
<tr>
<td>8 – 12</td>
<td>1.5</td>
<td>45 – 60</td>
</tr>
<tr>
<td>13 – 18</td>
<td>2.0</td>
<td>22 – 26</td>
</tr>
</tbody>
</table>

*NOT FOR USE IN Puppies LESS THAN 3 WEEKS OF AGE OR DOGS WEIGHING LESS THAN 2 LBS.*

**ADMINISTRATION:** Drontal® Plus Tablets have been developed for oral administration. Tablets may be given by mouth or offered in a small amount of food. Fasting is neither necessary nor recommended prior to or after treatment.

**RECOMMENDATIONS:** For those animals living where reinfections are likely to occur, clients should be instructed in the steps to optimize prevention. Otherwise, retreatment may be necessary. This is true in cases of Dipylidium caninum where reinfection is almost certain to occur if fleas are not removed from the animal and its environment. In addition, for control of Echinococcus multilocularis, a program of regular treatment every 21 to 26 days may be indicated (see E. multilocularis section below).

**ECHINOCOCUS MULTILOCULARIS:** Echinococcus multilocularis is a tapeworm species usually found in wild canids, including foxes, coyotes and wolves. The parasite has also been identified in domestic dogs and cats. Several studies have indicated human exposure to E. multilocularis. The original geographic distribution of E. multilocularis was primarily confined to northern areas of North America. Current evidence indicates migration of the parasite west into the continental United States. 1, 2, 3

Domestic dogs living in E. multilocularis endemic areas that roam freely with the opportunity to catch wild rodents are at risk of infection. Pet owners should be advised on how to minimize this risk. Proper restraint of dogs should be encouraged, along with regular treatment with Drontal® Plus Tablets, following the dosing schedule aforementioned and precautions indicated below.

**ADDITIONAL INFORMATION:**

Additional information on the life cycle and epidemiology of this parasite is available in veterinary parasitology texts. 4

**DIAGNOSIS:** Diagnosis of E. multilocularis in canids is difficult. The adult tapeworm produces no clinical signs of infection. Tapeworm segments (proglottids) are usually not observed in the feces. E. multilocularis eggs, observed using microscopic fecal examination procedures, are similar in appearance to those of common species such as Toxocara cati. Adult Echinococcus multilocularis may be available from a state veterinary diagnostic laboratory. Additional information regarding areas where E. multilocularis is suspected or has been confirmed may be obtained from area veterinary schools or the Centers for Disease Control in Atlanta, GA.

**TREATMENT:** Dogs infected with E. multilocularis should be treated to prevent exposure of humans to infective eggs and to break the parasite’s life cycle. The dosage of Drontal® Plus Tablets for treatment is the same as that indicated for the removal of other tapeworm species listed on the label. Laboratory efficacy studies have demonstrated the recommended dosage is 100% effective.

**PRECAUTIONS:** Strict hygienic precautions should be taken when handling dogs or feces suspected of harboring E. multilocularis. Infected dogs treated for the first time with Drontal® Plus Tablets and dogs treated at intervals greater than 28 days may shed eggs in the feces after treatment. The animal should be isolated and the dog receiving a single treatment of 61 mg praziquantel, 61 mg pyrantel pamoate and 179 mg febantel/kg of body weight for 3 consecutive days (3 times the labeled dosage) of the combination of febantel and praziquantel in early pregnancy demonstrated an increased incidence of abortion and fetal abnormalities. 5 The effects on Drontal® Plus on pregnant animals have not been determined.

There are no known contraindications against the use of praziquantel or pyrantel pamoate in dogs.

**EFFICACY:** A total of 176 dogs and puppies with naturally acquired or experimental parasite infections were included in 4 well-controlled laboratory studies to establish the efficacy of Drontal® Plus Tablets. In addition, 103 dogs and puppies were included in clinical field studies conducted in 5 veterinary clinics at different geographic locations throughout the country to further evaluate safety and efficacy. These studies included dogs of various sizes, ages and breeds. Data from these studies demonstrated Drontal® Plus Tablets are safe and efficacious for the removal of the parasite species indicated on the label when used as directed.

**SIDE EFFECTS:** None of the 103 dogs treated with Drontal® Plus Anthelmintic Tablets in the clinical field studies exhibited drug-related side effects.

**ANIMAL TOXICITY:** Controlled safety evaluations have been conducted in dogs with Drontal® Plus (praziquantel/pyrantel pamoate/febantel) Broad Spectrum Anthelmintic Tablets. Dogs receiving up to 5 times the labeled dosage (35 mg praziquantel, 35 mg pyrantel pamoate and 179 mg febantel/kg of body weight) for 3 consecutive days (3 times the label duration) showed clinical signs of vomition and non-forming stool in the dog receiving 5 times labeled dose had elevated SGPT, SGOT, BUN and GGT levels (outside of normal range) and showed drug-related side effects. Vomition was only observed when dogs received a single treatment of 61 mg praziquantel, 61 mg pyrantel pamoate and 305 mg febantel/kg with one dog having an elevated SGPT reading (outside of normal range) at 24 hours post-treatment which had returned to normal by 7 days.

**WARNING:** KEEP OUT OF REACH OF CHILDREN.

**CAUTION:** Federal (U.S.A.) law restricts this drug to use by or on the order of a licensed veterinarian.

**STORAGE CONDITIONS:** Drontal® Plus Tablets should be stored at controlled room temperatures between 15-30˚C (59-86˚F) (21-80˚F)

**HOW SUPPLIED:** Each tablet is available in bottles of 50 (puppies and small dogs, medium sized dogs) or 30 (large dogs).

Code 08713130-170699
50 Tablets/Bottle (Puppies and Small Dogs)

Code 08713149-177099
50 Tablets/Bottle (Medium Sized Dogs)

Code 08724610-177199
30 Tablets/Bottle (Large Dogs)

For customer service or to obtain product information, including Material Safety Data Sheet, call 1-800-633-3796. For medical emergencies or to report adverse reactions, call 1-800-422-9874.

**REFERENCES:**


6. Shawnee Mission, Kansas 66201 USA