

Controlling Coccidia in the Shelter

By Jim Babbitt, DVM

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Coccidiosis can have detrimental effects on the health of young animals, but the good news is that strict cleaning protocols and inexpensive treatments make the disease more manageable than other common problems such as URI and parvovirus

For pets in homes, coccidiosis—a diarrhea-related illness—is a relatively minor problem. Routine fecal examinations can detect the condition, and effective medications are inexpensive; in many cases pets recover completely without any treatment.

But in the shelter, coccidiosis is often seen in epidemic proportions, hitting puppies and kittens especially hard. Caused by a number of different species of protozoan parasites all commonly referred to as “coccidia,” coccidiosis by itself is rarely fatal. It can be debilitating enough, however, to greatly predispose young animals to other problems lurking in the background of a shelter environment. The condition is most devastating during warm seasons, when shelters are handling large numbers of stressed kittens of varying ages and cage space is at a premium.



Diarrhea that often contains blood and mucus is the key symptom of coccidiosis, which spreads readily among animals through ingestion of infected fecal matter. (Kittens and puppies typically contract it by licking fecal material that sticks to their feet and fur.) Young puppies and kittens have often received enough maternal antibodies from their mother’s milk to guard against active reproduction of coccidia and subsequent disease. But as their maternal protection starts to wane at about 35 to 40 days of age, infective eggs from a contaminated environment can initiate disease. Self-reinfection is a common problem both in individual animals and in litters; the eggs are extremely resistant to common disinfectants and are easily transferred from one litter to another through human contact.

Testing and Prevention

Of course, diarrhea in puppies and kittens can have other origins, but coccidiosis is always a prime suspect. And though a positive fecal exam confirms the presence of coccidia, a single negative fecal exam does not completely rule it out. If you suspect the presence of coccidia and have the resources to test for it, a veterinary technician or a trained layperson can run repeated fecal examinations. (See sidebar below for details.)

If your shelter is faced with an individual animal with clinical coccidiosis, often simple treatment coupled with isolation of the infected animal will solve the immediate problem. But if you identify an infected litter or, worse, a shelter outbreak, much more aggressive control measures are needed. While you will need to consult with a veterinarian (either your own staff veterinarian or a local private veterinarian) to obtain and administer medications, you can also take simple preventive measures that can alleviate the situation without requiring veterinary oversight.

First of all, prevention of reinfection is mandatory. Separation of individuals within a litter (if space allows), rapid removal of stools from cages or litter boxes, and prompt cleaning of cages are all simple but helpful techniques. Bathing kittens or puppies to clean stool off their fur is also



helpful. Careful removal of stools during routine cleaning is probably more important than application of some specific type of disinfectant; picking up stool and disposing of it is much more sanitary than hosing it down, a method that risks spraying microscopic infectious matter all over the walls and cages. (Avoid using the same scoop to clean litter box after litter box—a sure way to spread disease.)

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Coccidiosis is difficult to avoid in the shelter, but thorough cleaning can help stop its spread. Staff should hose down kennels and cages only after careful removal of feces and other debris.

Eggs are extremely resistant to common disinfectants like bleach or quaternary ammonium products. Oo-cide, a product made by Antec International, has been shown to reduce environmental contamination; it is a difficult product to use, however, as it requires a two-stage application and the donning of special protective clothing prior to application. (1)

Performing a Fecal Exam

A basic fecal examination can be performed by a veterinary technician or trained layperson. The technique is quite simple; with minimal training, anyone can perform the test and interpret the results. If you are not able to perform this test yourself in the shelter, any veterinary practice can perform it for you.

1. Start with one of the commercially available kits such as Fecalyzer. These kits are easiest to use because they provide all the basic equipment needed to run the test. Many of the materials can be easily cleaned and reused, greatly reducing costs.
2. Place a small amount of fresh stool in the container and thoroughly mix it with the flotation solution (Fecasol). Fill the container with the stool-Fecasol solution—to the point where the level of fluid slightly brims over the top lip of the container.
3. Place a microscopic coverslip over the container; allow it to sit on a level surface for 15 minutes.
4. Carefully remove the coverslip and place it on a microscopic slide (fluid side down); then place the slide under a microscope. Examine the slide systematically, using both the 10X and 40X lenses to cover the entire slide. Even an inexpensive microscope can be used in this process. Unlike less common parasites, whose detection requires much more sophisticated equipment and training, the eggs of most internal parasites (roundworms, hookworms, coccidia, and whipworms) are quite easy to see and identify.

Treatment Options

The second step in handling a widespread outbreak is the treatment of individual animals. Some drugs have proven effective in treating individual animals but are seemingly less so in treating multiple-animal outbreaks. In the latter cases it may be not so much a question of resistance; rather, it's likely that in those scenarios, the animals are being continually reinfected—highlighting the need for strict hygiene and cleaning measures alongside treatment of individual animals.

RELATED ARTICLE

For information about proper cleaning procedures, see “Keeping Your Cats Healthy” in the May-June 2001 issue of *Animal Sheltering*. You can access this issue by going to the [Back Issues](#) section of our site.

If you have the resources and proper isolation setup to treat animals, the following commonly used treatments could be obtained and administered with the help of a veterinarian or veterinary technician:

- **Sulfadimethoxine** is considered the best treatment for most animals with coccidia and should be administered at 50 mg/kg orally the first day and then 25 mg/kg orally per day for 21 days. (2) The cost is about \$.05 per day for a two-pound kitten.
- **Trimethoprim-sulfa** is another option and should be administered at 30-60 mg/kg/day for 10 days. (3) The cost is about \$.03 per day for a two-pound kitten.

- **Amprolium (Corid)** is available as a 9.6% solution and a 20% powder. Cats must receive it directly at 60 to 100 mg daily for seven days. The treatment can be given to dogs in a number of ways: The 9.6% solution can be added to water at a rate of 30 ml/gallon of water; this solution is used as the sole source of drinking water for the dog(s) for 10 days. Or, the 20% powder can be added to food at the rate of 250 to 300 mg total dose per dog once a day for seven to twelve days. (4) Neither the powder nor the solution is especially palatable, so administration can be difficult. The cost is about \$.02 per day for a two-pound kitten.

Realistically, coccidiosis is impossible to avoid in a shelter environment. The goal is to limit the condition to individual animals and prevent or minimize epidemic outbreaks. With proper, relatively inexpensive treatment and husbandry, coccidiosis can be controlled; in this respect, it's easier to manage than other shelter medicine problems like upper respiratory infection and parvovirus.

Quick Tips

Coccidia are debilitating internal parasites of stressed dogs and cats; they are spread by ingestion of fecal matter.

The most common symptom is bloody diarrhea, often occurring in puppies and kittens at about six to eight weeks of age.

Usually coccidiosis can be diagnosed easily by a simple fecal flotation exam, but a negative fecal exam does not completely rule out the presence of coccidia. If it's strongly suspected, a treatment trial is acceptable.

The most important facet of dealing with this disease in the shelter is not the treatment of individual animals, but rather the promotion of overall hygiene and careful husbandry that will prevent infection or reinfection. Prevention of fecal contamination is essential, especially for kittens and puppies.

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Resources Cited

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