



Adult Dog Parasites

Clermont Animal Hospital, Inc.

Parasites are living beings such as worms or insects that live on or inside your pet. They usually feed upon your pet, which can cause them to be uncomfortable, malnourished or even to die.

Intestinal Parasites

Intestinal parasites, such as whipworms, hookworms, tapeworms and giardia, are a very common problem in adult dogs. If your dog has exposure to other animals or is recently from an animal shelter, he or she is at a higher risk.

Symptoms

Symptoms of intestinal parasites include vomiting and diarrhea, poor condition of fur, and in extreme cases, death. However, some dogs with parasites do not show these symptoms. Just because you do not see the worms does not mean that they are not there. It is important to realize these worms live in the intestines, so you will NOT see them in the stool of your dog unless they are dead or dying.

Diagnosis—Fecal Analysis

We recommend a routine fecal examination for all new dogs, and then examinations twice a year (preferably spring and fall) thereafter. For adult dogs, we use a sophisticated test involving a series of steps including centrifugation and flotation. This provides much more accurate results than the simple flotation technique that most vets use. Please bring a small amount of stool with you when you bring your dog for vaccinations. If you have several dogs sharing the same yard, only one stool sample is needed. It is best if the sample is less than 24 hours old.

The fecal analysis shows if there are intestinal parasite eggs or single-cell parasites called giardia in your dog's stool. This is important to know because some parasites can infect humans when the eggs are being shed in the stool. It is also important to know that your dog can re-infect himself or infect other dogs when eggs are being passed. Eggs can survive in your yard for long periods (in some cases, up to 5 years) if stools are not properly disposed of. For this reason, it is important to pick up all stools promptly and properly dispose of them if your dog has parasite eggs in the stool.

Also, please note that just because your dog's fecal analysis was negative (no worm eggs) at a previous visit, it does not mean that these parasites are not present. Due to their complex life cycle, worms may be present without shedding eggs. For new dogs, it is important to have at least three negative stool samples before we can assure you that your dog is free of all parasites. Twice a year stool tests will help make sure your dog remains parasite free.

Can intestinal parasites affect my family?

It is important for you to know if your dog is currently shedding eggs in his or her stool so you can protect your family. Humans, particularly children, can be infected with certain worms by ingesting the egg or larva (baby worm). This is only a concern if there are eggs in your dog's stool. Prompt removal of all stool and proper hygiene can easily prevent any chance of infection.

If your dog is actively shedding parasite eggs, it is very important to be as clean as possible in dealing with your dog. **It is also very important to pick up ALL stools to prevent accidental infection of a family member or re-infection of your dog.** If the stool is left in the yard, eggs can survive in for more than a year and can contaminate soil even after the stool has degraded.

Tapeworms

While most intestinal parasites have a direct life cycle (meaning they pass directly from dog to dog), tapeworms do not. The tapeworm requires an intermediate host—an animal other than a dog—to complete its life cycle.

Two types of tapeworms are seen in cats. The first type is spread by the flea. A dog ingests a flea carrying the tapeworm while grooming or biting at fleas, and the tapeworm then infects the dog. This type of tapeworm must be treated by treating both the worm itself AND the fleas. Otherwise, the fleas will continue to re-infect the dog with tapeworms.

The second type of tapeworms seen in dogs uses rabbits and/or rodents as the intermediate host. If the dog kills and eats an animal carrying these tapeworms, he or she can become infected. This type of tapeworm is much less common in dogs, but dogs that hunt regularly may suffer tapeworm infections.

Diagnosis: Because tapeworms use an intermediate host and are not passed through the stool from dog to dog, the eggs do not always show up on fecal exam. A tapeworm infection is usually diagnosed when an owner sees the worm segments (which look like a rice grain or a cucumber seed) near the anus or on the stool of the dog.

Treatment: Tapeworms require special medication for treatment. Routine wormers for other types of worms have no effect on the tapeworm. Once tapeworms are diagnosed the veterinarian will prescribe medication specifically for tapeworms. Remember that if a flea problem exists, it is also VERY important to treat the fleas at the same time to prevent re-infection.



Adult Cat Parasites

Clermont Animal Hospital, Inc.

Parasites are living beings, such as worms or insects that live on or inside your pet. They usually feed upon your pet, which can cause him or her to be uncomfortable, malnourished and (in extreme cases) may lead to death.

Intestinal Parasites

Intestinal parasites, such as hookworms, tapeworms and giardia, are a very common problem in adult cats. If your cat is an outdoor cat, indoor/outdoor cat, or recently adopted from an animal shelter, he or she is particularly at risk.

Symptoms

Symptoms of intestinal parasites include vomiting and diarrhea, poor condition of fur, and in extreme cases, death. However, some cats with parasites do not show these symptoms. Just because you do not see the worms does not mean that they are not there. It is important to realize these worms live in the intestines, so you will NOT see them in the stool of your cat unless they are dead or dying.

Diagnosis—Fecal Analysis

We recommend a routine fecal examine when you get a new cat and then exams twice a year thereafter for cats that spend time outside. For adult cats, we use a sophisticated test involving a series of steps, including centrifugation and flotation. This advanced test provides much more accurate results than the simple flotation technique that most veterinarians use.

Please bring a small amount of stool with you when you bring your cat for vaccinations. If you have several cats sharing the same litter box, only one stool sample is needed. It is best if the sample is less than 24 hours old.

The fecal analysis shows if there are intestinal parasite eggs, toxoplasmosis eggs or single-cell parasites called giardia in your cat's stool. This is important to know because some parasites can infect humans when the eggs are being shed in the stool. It is also important to know that your cat can re-infect himself or infect other cats when eggs are being passed. For this reason, it is important to pick up all stools promptly and properly dispose of them if your cat has parasite eggs in the stool.

Please note that just because your cat's fecal analysis was negative (no worm eggs) at a previous visit, it does not mean that these parasites are not present. Due to their complex life cycle, worms may be present without shedding eggs. In a new cat, it is important to have at least three negative stool samples before we can assure you that your cat is free of all parasites. Cats that spend time outdoors should be tested twice a year (preferably spring and fall) for intestinal parasites.

Can intestinal parasites affect my family?

It is important for you to know if your cat is currently shedding eggs in his or her stool so you can protect your family. Humans, particularly children, can be infected with certain worms by ingesting (eating) the egg or larva (baby worm). This is only a concern if there are eggs in your cat's stool. Prompt removal of all stool and using proper hygiene can easily prevent any chance of infection.

If your cat is actively shedding parasite eggs, you should be as clean as possible in dealing with your cat. **It is also very important to pick up ALL stools to prevent accidental infection of a family member or re-infection of your cat.** If the stool is left in the yard, eggs can survive in for more than a year and can contaminate soil even after the stool has degraded.

Tapeworms

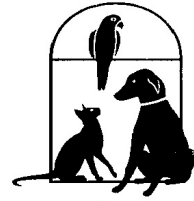
While most intestinal parasites have a direct life cycle (meaning they pass directly from cat to cat), tapeworms do not. The tapeworm requires an intermediate host—an animal other than a cat—to complete its life cycle.

Two types of tapeworms are seen in cats. The first type is spread by the flea. A cat ingests a flea carrying the tapeworm while grooming, and the tapeworm then infects the cat. This type of tapeworm must be treated by treating both the worm itself AND the fleas. Otherwise, the fleas will continue to re-infect the cat with tapeworms.

The second type of tapeworms seen in cats uses rabbits and/or rodents as the intermediate host. If the cat kills and eats an animal carrying these tapeworms, he or she can become infected. Cats that hunt regularly may suffer frequent tapeworm infections. In some cases, routine treatment for tapeworms becomes necessary to keep the problem under control.

Diagnosis: Because tapeworms use an intermediate host and are not passed through the stool from cat to cat, the eggs do not always show up on fecal exam. A tapeworm infection is usually diagnosed when an owner sees the worm segments (which look like a rice grain or a cucumber seed) near the anus or on the stool of the cat.

Treatment: Tapeworms require special medication for treatment. Routine wormers for other types of worms have no effect on the tapeworm. Once tapeworms are diagnosed the veterinarian will prescribe medication specifically for tapeworms. Remember that if a flea problem exists, it is also VERY important to treat the fleas at the same time to prevent re-infection.



Puppy Parasites

Clermont Animal Hospital, Inc.

Parasites are living beings such as worms or insects that live on or inside your pet. They usually feed upon your pet, which can cause discomfort, malnourishment, or even death.

Intestinal Parasites

Intestinal parasites, such as round worms, hookworms, tapeworms and coccidia, are a very common problem in puppies. In fact, nearly all puppies are born with round worms. Round worms can be transmitted from the mother to the puppies while they are still in the uterus and can also be passed through the milk to nursing puppies.

Symptoms

Symptoms of intestinal parasites include vomiting and diarrhea, poor condition of fur, and in extreme cases, even death. However, some dogs with parasites do not show these symptoms. Just because you do not see the worms does not mean that they are not there. It is important to realize these worms live in the intestines, so you will NOT see them in the stool (bowel movement) of your dog unless they are dead or dying.

Prevention and Diagnosis

Worming: We recommend routine worming for all puppies when they come in for their vaccinations every three to four weeks until they are at least four months old. Puppies with a lot of worms or with vomiting or diarrhea related to the worms may need to be wormed more frequently. A single worming is never enough to protect a puppy because these worms migrate through the liver and lungs but can only be killed when they are in the intestines. It is also important to remember that giving your puppy a general de-wormer does not lessen the need for a fecal analysis. The fecal analysis will show us whether your puppy is actively shedding eggs or has other parasites not treated by the general de-wormer.

Fecal Analysis: In addition to giving your puppy a de-wormer at each visit, we recommend a routine fecal exam at each visit. Please bring a small amount of stool with you when you bring your puppy for vaccinations. If you have several puppies from the same litter, only one stool sample is needed. It is best if the sample is less than 24 hours old.

The fecal analysis shows if there are intestinal parasite eggs or single-cell parasites called coccidia in your puppy's stool. This is important to know because some parasites can infect humans when the eggs are being shed in the stool. It is also important to know that your dog can re-infect himself or infect other dogs when eggs are being passed. Eggs can survive in your yard for long periods (in some cases, up to 5 years). For this reason, it is important to pick up all stools promptly and properly dispose of them.

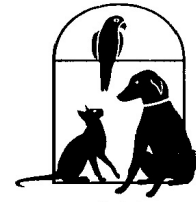
It is important to understand that just because your puppy's fecal analysis was negative (no worm eggs) at a previous visit, it does not mean that these parasites are not present. Due to their complex life cycle, worms may be present without shedding eggs. It is important to have at least three negative stool samples before we can assure you that your puppy is free of all parasites.

Adult Fecal Tests: At your last puppy vaccination visit, we recommend an "adult" fecal. This is because by the time your puppy is four months old, he or she can be infected with worms that are a problem for adult dogs. These worms are more difficult to detect and require a more sophisticated test to ensure accuracy. **We recommend that this test be run twice a year (spring and fall) for all adult dogs.**

Can intestinal parasites affect my family?

It is important for you to know if your puppy is currently shedding eggs in his or her stool so you can protect your family. Humans, particularly children, can be infected with round worms by ingesting the egg once it has developed in the environment for 24 hours. This is only a concern if there are eggs in your puppy's stool. Prompt removal of all stool and proper hygiene can easily prevent any chance of infection.

If your puppy is actively shedding parasite eggs, it is very important to be as clean as possible in dealing with your puppy. **It is also very important to pick up ALL stools to prevent accidental infection of a family member or re-infection of your puppy.** If the stool is left in the yard, eggs can survive for more than a year and can contaminate soil even after the stool has degraded.



Clermont Animal Hospital, Inc.

Kitten Parasites

Parasites are living beings such as worms or insects that live on or inside your pet. They usually feed upon your pet, which can cause your kitten discomfort, malnourishment, or even death.

Intestinal Parasites

Intestinal parasites are a very common problem in kittens. In fact, nearly all kittens are born with **roundworms**. These worms can be transmitted from the mother to the kittens while they are still in the uterus and can also be passed through the milk to nursing kittens.

Symptoms

Symptoms of intestinal parasites include vomiting and diarrhea, poor condition of fur, and in extreme cases, even death. However, some kittens with parasites do not show these symptoms.

Just because you do not see the worms does not mean that they are not there. It is important to realize these worms live in the intestines, so you will NOT see them in the stool of your kitten unless they are dead or dying.

Prevention and Diagnosis

Worming—Clermont Animal Hospital, Inc. recommends routine worming for all kittens every three to four weeks with vaccinations until they are at least four months old. Kittens with a heavy worm burden or with vomiting or diarrhea related to the worms may need to be wormed more frequently.

Fecal Examination—In addition to giving your kitten a de-wormer at each visit, we recommend a routine fecal examination at each visit. Please bring a small amount of stool (bowl movement) with you when you bring your kitten for vaccinations. If you have several kittens from the same litter, only one stool sample is needed.

The fecal analysis shows if there are intestinal parasite eggs or single-cell parasites called **coccidia** in your kitten's stool. This is important to know because some parasites can infect humans when the eggs are being shed in the stool.

The fecal analysis also allows us to determine if your kitten has intestinal parasites other than roundworms. Hookworms, tapeworms and coccidia all can affect young kittens. These parasites can also cause diarrhea, vomiting, poor body or coat condition, and (in extreme cases) even death.

The general de-wormer that we give your kitten for roundworms does not provide protection against some of these other parasites. While they are not nearly as common as roundworms in kittens, they are still seen very frequently.

How many times should my kitten be tested? It is also important to understand that just because your kitten's fecal was negative (no worm eggs) at a previous visit, does not mean that these parasites are not present. Due to their complex life cycle worms may be present without shedding eggs. It is important to have at least three negative stool samples before we can assure you that your kitten is free of all parasites.

At your last kitten vaccination visit, we recommend an **“adult” fecal**. This is because by four months old, kittens can be infected with worms that are a problem for adult cats. These worms are more difficult to detect and require a more sophisticated test to ensure accuracy. We recommend that this test be run on a yearly basis for all adult cats.

Protecting Your Family

It is important for you to know if your kitten is currently shedding roundworm eggs in his or her stool in order to protect your family. Humans, particularly children, can be infected with roundworms by eating the larva. This is only a concern if there are eggs in your kitten's stool.

If your kitten is actively shedding parasite eggs, it is very important to be as clean as possible in dealing with your kitten. It is also very important to pick up ALL stools immediately (clean the litter box several times a day) to prevent accidental infection of a family member or re-infection of your kitten. If the stool is left in the litter box, eggs can develop into the infective larval state.

Toxoplasmosis

Toxoplasma gondii is a parasite with a very complex life cycle. Cats contract this parasite through exposure to stool of an infected cat or by eating an infected animal (such as a mouse or raw meat).

Protecting Your Family

While the reproductive stage of toxoplasmosis only occurs in cats, intermediate stages can affect humans and many other animals. Human infections are more likely to be passed through undercooked meat or gardening in areas where stray cats may defecate than to exposure from a pet cat. However, because this disease can cause serious health problems, particularly in children and pregnant women, it is a concern. Therefore, it is very important to have your cat screened for this parasite.

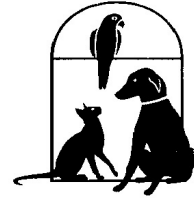
The following are recommendations for people at high risk for contracting toxoplasmosis (pregnant women, children under 10 and individuals with weak immune systems):

1. Have an adult fecal sample test performed to look for *Toxoplasma* eggs in the stool.
2. Have your cat tested for FIV/FeLV. Cats with these diseases are more likely to shed eggs. If your cat is positive for either of these diseases or has a weak immune system for any other reason, a blood test is recommended to ensure that your cat is not a carrier of this disease.
3. Make sure the stool is removed from the litter box promptly and properly disposed of. It is recommended that high-risk individuals not clean the litter box. If this cannot be avoided, wear gloves, and wash your hands thoroughly.
4. Remember that pet cats are only one source of infection. Be sure to take precautions from other sources of exposure (cook all meat thoroughly, wear gloves when gardening, etc.).

5. Keep your cat indoors. This decreases the risk of exposure.

Screening

The “adult” fecal we recommend at 16 weeks will identify the eggs in the stool if your kitten is shedding eggs. Cats must be actually shedding eggs in order for a human to become infected. Young cats and cats with FIV or FeLV are more likely to shed the eggs of this parasite than other cats; however, any infected cat will shed eggs during times of stress. Eggs in the stool are not infectious until they have developed into the larval stage one to two days later. For this reason, cleaning stool from the litter box daily should prevent human infection.



Parasites in Exotic Pets

Ferrets

Ferrets generally do not have as much of a problem with intestinal parasites as dogs and cats, mostly because of their limited exposure to other animals. However, intestinal parasites cause much more severe problems in ferrets than in cats or dogs. For this reason, yearly fecal examination is usually recommended. Coccidia and giardia are the two most common parasites seen in ferrets.

Rabbits

Coccidia are the most common intestinal parasites in rabbits. These are single-celled organisms that live in the gut and can cause a variety of problems including bloody diarrhea. They are most common in young rabbits. To help protect your rabbit against these parasites, we recommend a fecal examination to test for these and other parasites. Adult rabbits don't generally need routine fecal exams unless they are in direct contact with rabbits outside of your household.

Rodents

Rodents generally do not have problems with intestinal parasites to the same degree as other species. Fecal examination is usually only recommended if diarrhea or other intestinal problems are evident.

Reptiles

A great variety of intestinal parasites are seen in reptiles. Wild-caught reptiles or those housed with wild-caught reptiles are at the highest risk for parasite infection. A fecal analysis is recommended for all new reptiles and should be repeated three to six months later.

Diagnosis—Fecal Analysis

For reptile fecal examination we use a sophisticated test involving a series of steps including centrifugation and flotation. This provides much more accurate results than the simple flotation technique that most veterinarians use.

Because reptiles pass stool less frequently than mammals, it is best for the owner to collect a fresh sample when it is available and bring it to Clermont Animal Hospital, Inc. for testing. Owners are rarely able to collect stool on the day of a scheduled visit unless they are very in tune with their pet's elimination habits and schedule the visit accordingly. Stool can be collected during a routine visit using a technique called a cloacal flush; however, because there is an additional charge for this procedure, most owners prefer to bring in a sample when it is available.

Treatment

The type of treatment will depend on which parasites are present and the species of the pet being treated. A fecal analysis is repeated after the course of treatment is complete to insure that all parasites were eliminated.

Birds

Giardia and trichomonas are the most common gastrointestinal parasites in birds. Both are single-cell protozoal type parasites. Both of these parasites can cause generalized gastrointestinal signs. Routine fecal examination is usually not successful in diagnosing these parasites. Specific tests for the parasite are recommended only when clinical signs suggest that the parasite may be present.

Trichomonas usually lives in the crop and causes crop stasis (decreased movement of food through the crop), crop distension (bulging), and food regurgitation. White or yellow plaques in the mouth or throat are also seen with trichomonas infections. It is most common in canaries, pigeons, and wild-caught birds but can occur in parakeets, cockatiels, and Amazon Parrots. It can be diagnosed by making a wet-mount of a crop swab to look for the parasite under the microscope. This infection is treated with antiprotozoal medication. Often secondary bacterial or yeast infections are also present and must be treated at the same time.

Giardia usually affects the intestines of birds. It is most common in toucans, parakeets, cockatiels, and lovebirds but can affect any species. Giardia may not cause any clinical problems, but it frequently is associated with diarrhea, weight loss, and itchy skin/feather picking. Diagnosis can be difficult and may involve several different types of tests. Treatments are not always effective and resistance to medications is high. For this reason, it is important to diagnose the parasite before attempting any treatment.

Other Intestinal Parasites do occur in birds. Many of these are specific to certain bird species. While routine fecal examination for parasites is not recommended, birds showing signs consistent with a parasite infection should be tested.

Wildlife and Exotic Mammals

Most wildlife and exotic mammals require routine fecal examination for parasites. For wildlife and exotic mammal fecal examination we use a sophisticated test involving a series of steps including centrifugation and flotation. This provides much more accurate results than the simple flotation technique that most vets use. Please speak with one of the veterinarians at Clermont Animal Hospital regarding the types of parasites most common in your pet's species.