



Preventative Pet Health Manual

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Vaccines

Bordetella

What is Bordetella?

Bordetella is a bacterium that can cause a disease called Infectious Tracheobronchitis, more commonly known as kennel cough. Kennel cough is a highly contagious respiratory infection that causes runny nose, coughing, sneezing, retching, and sometimes vomiting and fever. It can also lead to more serious infections in the lungs if left untreated.

How does the Bordetella vaccine help prevent these diseases?

The vaccination fortifies your animal's immune system against the bacteria so that, if your animal is ever exposed, their immune system can fight the infection before it makes your animal sick, or at least decrease the symptoms of disease.

DA2PP

What diseases does the DA2PP vaccine guard against?

The DA2PP vaccine protects dogs against four different diseases:

- **Distemper** - A disease that causes upper respiratory illness, diarrhea, vomiting, dehydration, seizures, tremors, weight loss, and, in many cases, death.
- **Adenovirus (Type 2)** - A virus that can develop into upper respiratory illness or liver infection.
- **Parvovirus** - An illness affecting the intestinal tract that causes severe diarrhea and vomiting. It is seen most often in puppies and, in many cases, it is fatal.
- **Parainfluenza** - This is an upper respiratory disease that causes congestion and coughing, can lead to other respiratory problems if left untreated, and even death.

How does the DA2PP vaccine prevent these diseases?

If fully vaccinated, your animal's immune system is fortified against these illnesses by the vaccine so that, if your animal is ever exposed, the immune system can fight the virus before it makes your animal sick.

Why should I vaccinate my pet against these diseases?

Although the DA2PP vaccine is not required by law, it is highly recommended for all dogs, especially puppies. Distemper, adenovirus, parvovirus, and Parainfluenza are all highly contagious, so any contact your dog has with other dogs, or if your dog goes places other dogs have been, could result in exposure to these viruses. Since many of these illnesses are fatal, prevention is very important, and the vaccination is your pet's only defense, should they come into contact with any of these viruses.

How often does my dog need to be vaccinated?

The DA2PP vaccine that Spay & Neuter Kansas City uses is an annual injection and must be repeated every year. The first time your dog or puppy has a DA2PP vaccination, it should be boosted within 3-4 weeks, to ensure proper protection. In very young puppies, this booster may be required up to 5 times. Always check with your vet to make sure you know how often your dog/puppy needs to be updated on this vaccine.

FVRCP

What diseases does the FVRCP vaccine guard against?

The FVRCP vaccine protects cats against three different diseases:

- **Feline Viral Rhinotracheitis**: A disease that causes upper respiratory illness and chronic eye or nasal problems, also known as feline herpes. It can progress into pneumonia and become fatal in young kittens and cats with weak immune systems.
- **Calicivirus**: Another upper respiratory illness that can also cause ulcers in the mouth and lead to pneumonia.
- **Panleukopenia**: A disease similar to parvovirus in dogs. It causes severe diarrhea, dehydration, and loss of bone marrow and white blood cells. It is often fatal and can kill rapidly if not caught early and treated.

How does the FVRCP vaccine prevent these diseases?

If fully vaccinated, your animal's immune system is fortified against these illnesses by the vaccine so that if your animal is ever exposed, the immune system can fight the virus - before it makes your pet sick.

Why should I vaccinate my pet against these diseases?

Although the FVRCP vaccine is not required by law, it is highly recommended for all cats.

Outdoor cats can be especially vulnerable to these diseases, but even if your cat is kept indoors and away from other animals, accidents can happen. If your cat gets out by mistake, there is a chance it will come into contact with another cat carrying one of these diseases; you can also bring these diseases home on clothes or shoes. In that case, this vaccination is their only protection against a miserable and potentially deadly illness.

How often does my pet need to be vaccinated?

The FVRCP vaccine that Spay & Neuter Kansas City uses is an annual injection and must be repeated every year. Kittens under 17 weeks of age, or who have never been vaccinated, require boosters every 3-4 weeks.

Rabies

What is rabies?

Rabies is a very serious and life-threatening disease caused by a virus that can be transmitted through animal bites. The virus travels through the bloodstream to the nervous system. It then attacks the brain, causing inflammation along the spinal cord and in the brain's tissue. It is contagious to all mammals, including humans, and it is fatal within a few days. There is no treatment for rabies in animals or humans, and is one of the only diseases that is 100% fatal but 100% preventable with vaccination.

How does the rabies vaccine prevent the disease?

The vaccination fortifies your animal's immune system against the disease so that, if your animal is ever exposed, the immune system can fight the virus before it makes your animal sick.

Why should I vaccinate my animal against rabies?

Vaccinating your pets for rabies will ensure that they do not die from the disease, but beyond that, it's also required by law in both Kansas and Missouri. Boarding and grooming facilities also require proof of vaccination before they will house or handle your pets, and many landlords won't allow tenants to keep cats and dogs without seeing a copy of their rabies certificates. In addition to helping your animal stay safe, vaccinating your pets against rabies also protects the community against transmission from animals to humans. If your animal is ever reported for biting a human and you don't have proof of rabies vaccination, your animal could be subjected to a mandatory quarantine for up to 6 months, or it may have to be euthanized so the brain tissue can be tested for the virus. There is only 1 test for rabies, and it can only be done on brain tissue from a deceased animal.

How often does my pet need to be vaccinated?

Here at Spay & Neuter Kansas City, we use an annual vaccine that has to be updated yearly, but there are also vaccinations available that only have to be repeated every three years. You should always check with your veterinarian to find out for sure how often your pets need to be vaccinated.

Retroviruses

Feline Leukemia Retrovirus (FeLV)

What Is the Feline Leukemia Virus (FeLV)?

First discovered in the 1960s, feline leukemia virus is a transmittable RNA retrovirus that can severely inhibit a cat's immune system. It is one of the most commonly diagnosed causes of disease and death in domestic cats, with up to 3% of the US feline population infected. Because the virus doesn't always manifest symptoms right away, any new kitten or cat entering a household—and any sick cat—should be tested for FeLV. An infected cat can develop cancer and/or immune deficiencies that eventually prove fatal.

How Do Cats Get FeLV?

The FeLV virus is shed in many bodily fluids of infected cats, including saliva, nasal secretions, urine, feces, blood, and milk. FeLV is most commonly transmitted through direct contact (fighting/bites), mutual grooming, and very rarely through sharing litter boxes, food and water bowls. It can also be passed in utero or through mother's milk.

How Is FeLV Diagnosed?

There are several types of tests available to diagnose and confirm FeLV. To initially test for the disease, veterinarians and PRCKC use the ELISA (enzyme-linked immunosorbent assay) test, which detects the antigen to the FeLV virus in the bloodstream. Other tests to confirm the diagnosis are the IFA (indirect fluorescent antibody) test or PCR (polymerase chain reaction) test, and can be performed at a full-service veterinarian.

Positive results

- A positive test indicates that the cat has become infected. When infected, the cat can become progressively infected or regressively infected. Progressive infections involve the FeLV virus actively circulating in the bloodstream, meaning the cat can pass it to other cats through bodily

fluids, and will eventually show clinical signs of disease. A regressive infection, which only occurs in about 10% of cats, occurs when the immune system can effectively eliminate it from the bloodstream but the virus gets incorporated into their bone marrow for life. The cat cannot pass the infection to other cats but in future times of stress or sickness, the virus can reactivate; once reactivated, the cat is able to pass it to other cats through bodily fluids and will eventually show signs of disease.

- Further testing is recommended to confirm a positive test, and can be performed at a full-service veterinarian.

Negative results

- A negative test result indicates that antigens directed against FeLV have not been detected and, in most cases, this implies that the cat is not infected.

Which Cats Are Prone to FeLV?

Young intact cats less than one year of age are most susceptible to the virus. Cats who live with an infected cat, cats who are allowed outdoors where they may be bitten by an infected cat, and kittens who are born to a mother who is FeLV positive are most at risk for infection.

Can Other Pets Catch FeLV?

Yes, FeLV is contagious to other cats, but not to humans or other species. Other cats in the house can acquire the virus from an infected cat. Though the virus doesn't live long outside of the body and is easily inactivated with common disinfectants, it can be passed through shared food and water, common litter boxes, and mutual grooming. For the safety of FeLV negative cats, we recommend not cohousing FeLV negative and FeLV positive cats together in the same home.

When should I have my cat tested?

- If your cat has never been tested.
- If your cat is sick, even if it tested free of infection in the past but subsequent exposure can't be ruled out.
- When cats are newly adopted, whether or not they will be entering a household with other cats.
- If your cat has recently been exposed to an infected cat.
- If your cat is exposed to cats that may be infected (for example, if your cat goes outdoors unsupervised or lives with other cats that might be infected). Your veterinarian may suggest testing periodically (yearly) as long as your cat is exposed to potentially infected cats.
- If you're considering vaccinating with the FeLV vaccine.

How Is FeLV Treated?

Sadly there is no cure for FeLV, and it is estimated that clinically infected cats survive an average of 2.5 years.

How Can FeLV Be Prevented?

There is a vaccine available for cats who are at risk of contracting FeLV. Like all vaccines, there are risks involved in vaccination, and the vaccine is not a 100-percent guarantee against infection. Your veterinarian can best evaluate whether this vaccine is right for your cat.

As with any infectious disease, the best prevention is eliminating sources of exposure. Annual FeLV testing and keeping your cat indoors and away from cats whose FeLV status is unknown remain the best ways to prevent your cat from becoming infected.

Feline Immunodeficiency Virus (FIV)

What is Feline Immunodeficiency Virus?

FIV is a virus that attacks the immune system in cats, leaving it vulnerable to infections that a healthy cat can usually fight off. FIV cats can live a long life when provided with proper monitoring and veterinary care. It is similar to HIV in humans.

How common is the infection?

FIV-infected cats are found worldwide, but the prevalence of infection varies greatly. In the United States, up to 3 percent of healthy cats are infected with FIV.

How is FIV spread?

The primary mode of transmission is through bite wounds. Casual, non-aggressive contact does not appear to be an efficient route of spreading FIV; as a result, cats in households with stable social structures where housemates do not fight are at small risk for acquiring FIV infections. On occasion, infection is transmitted from an infected mother cat to her kittens, usually during passage through the birth canal or when the newborn kittens ingest infected milk. Sexual contact is not a major means of spreading FIV.

What does FIV do to a cat?

An infected cat may not show signs initially, but the cat's health can decline quickly or intermittently. It can start with small minor infections that eventually overwhelm the cat's immune system and eventually leads to death due to an overwhelming infection.

How is infection diagnosed?

Antibody tests detect the presence of antibody in the blood of infected cats.

Positive results

- Infected mother cats transfer FIV antibodies to nursing kittens, so kittens born to infected mothers may receive positive test results for several months after birth. However, few of these kittens actually are or will become infected. To clarify their infection status, kittens younger than six months of age receiving positive results should be retested at 60-day intervals until they are at least six months old.
- Results should be confirmed with further testing, and can be performed at a full-service veterinarian.

Negative results

- A negative test result indicates that antibodies directed against FIV have not been detected, and, in most cases, this implies that the cat is not infected. Nevertheless, it takes 8 to 12 weeks after infection or exposure (and sometimes even longer) before detectable levels of antibody appear, so if the test is performed during this interval, inaccurate results might be obtained. Therefore, antibody-negative cats with either an unknown or a known exposure to FIV-infected cats -- such as through the bite of an unknown cat -- should be retested a minimum of 60 days after their most recent exposure in order to allow adequate time for development of antibodies.

How can I keep my cat from becoming infected?

The only sure way to protect cats is to prevent their exposure to the virus. Cat bites are a major way infection is transmitted, so keeping cats indoors -- and away from potentially infected cats that might bite them -- markedly reduces their likelihood of contracting FIV infection.

Why should I have my cat tested?

Early detection will help you maintain the health of your own cat and also allow you to prevent spreading infection to other cats.

When should I have my cat tested?

- If your cat has never been tested.
- If your cat is sick, even if it tested free of infection in the past but subsequent exposure can't be ruled out.
- When cats are newly adopted, whether or not they will be entering a household with other cats.
- If your cat has recently been exposed to an infected cat.
- If your cat is exposed to cats that may be infected (for example, if your cat goes outdoors unsupervised or lives with other cats that might be infected). Your veterinarian may suggest testing periodically (yearly) as long as your cat is exposed to potentially infected cats.
- If you're considering vaccinating with an FIV vaccine.

Vaccination Schedules

Standard interval for puppies and kittens is 2-4 weeks. PRCKC recommends 3 weeks. Too often if you tell a client 4 weeks it is often 5 or more before they come back and then their pet has become vulnerable.

Canine Schedules

Puppies

DA2PP (distemper/adenovirus/parainfluenza/parvo): Typically start at 8-10 weeks of age, although if a puppy has been separated from its mother vaccines should start at 6 weeks. Given every 3 weeks, with the last dose given at 20 weeks or older to be protected for a year.

Bordetella: Given at 3-4 months of age, but can be as young as 8 weeks. Repeated every 6 months or yearly depending on potential for exposure i.e. boarding, grooming, dog park, etc.

Rabies: Given at approximately 4 months, as this is when the adult teeth are emerging and the true age of the pet can be documented instead of guessing. Needs to be repeated yearly.

Puppies over 5 months old or adult dogs that have never been vaccinated and/or are overdue

DA2PP: One dose given, then repeated in 3 weeks. It is then given annually after that.

Bordetella: Same as puppies.

Rabies: Same as puppies, and needs to be repeated yearly. Some veterinarians do carry a 3 year vaccine, but PRCKC only carries the annual vaccine.

Adult Dogs

With a previous history of vaccination, the DA2PP, bordetella, and rabies vaccines are given annually. Otherwise see schedule for puppies/adult dogs that never had vaccines or are overdue.

Feline Schedules

Kittens

FVRCP (Feline viral rhinotracheitis, calicivirus, panleukopenia): Typically start at 8-10 weeks of age, unless kitten is separated from the mother, then vaccines should start at 6 weeks. Given every 3 weeks, with the last dose given at 20 weeks or older to be protected for a year.

Rabies: Given at 4 months, or when the adult teeth have started erupting.

Kittens over 5 months old or adult cats that have never been vaccinated and/or are overdue

FVRCP: One dose given, then repeated in 3 weeks. It is then given annually after that.

Rabies: Once a year, even if indoors only.

Adult Cats

FVRCP and rabies: with a previous history of vaccination, FVRCP, Rabies and, if elected, Feline Leukemia, are given yearly. Otherwise see schedule for kittens/adult cats that never had vaccines or are overdue.

Feline Leukemia: 2 doses given 3 weeks apart. First dose at 8-10 weeks in kittens. Then repeat vaccinations once a year. Recommended for cats that go outside as they are at increased risk. If overdue by over 6 weeks for FeLV booster, testing for FeLV is recommended before vaccinating and 2 doses 3 weeks apart are needed.

Fleas

Fleas can live on many mammals - like small rodents or wildlife - including dogs and cats. Fleas can jump far distances quickly, so they can travel without being seen. Adult fleas only make up approximately 5% of the total flea population, with the remainder being pupae, larvae and eggs. An adult flea lives for approximately 3 months, and a female can lay up to 50 eggs per day if given a steady blood/meal source. The average flea life cycle is 21 days, but can be longer or shorter depending on the temperatures indoors and outdoors.

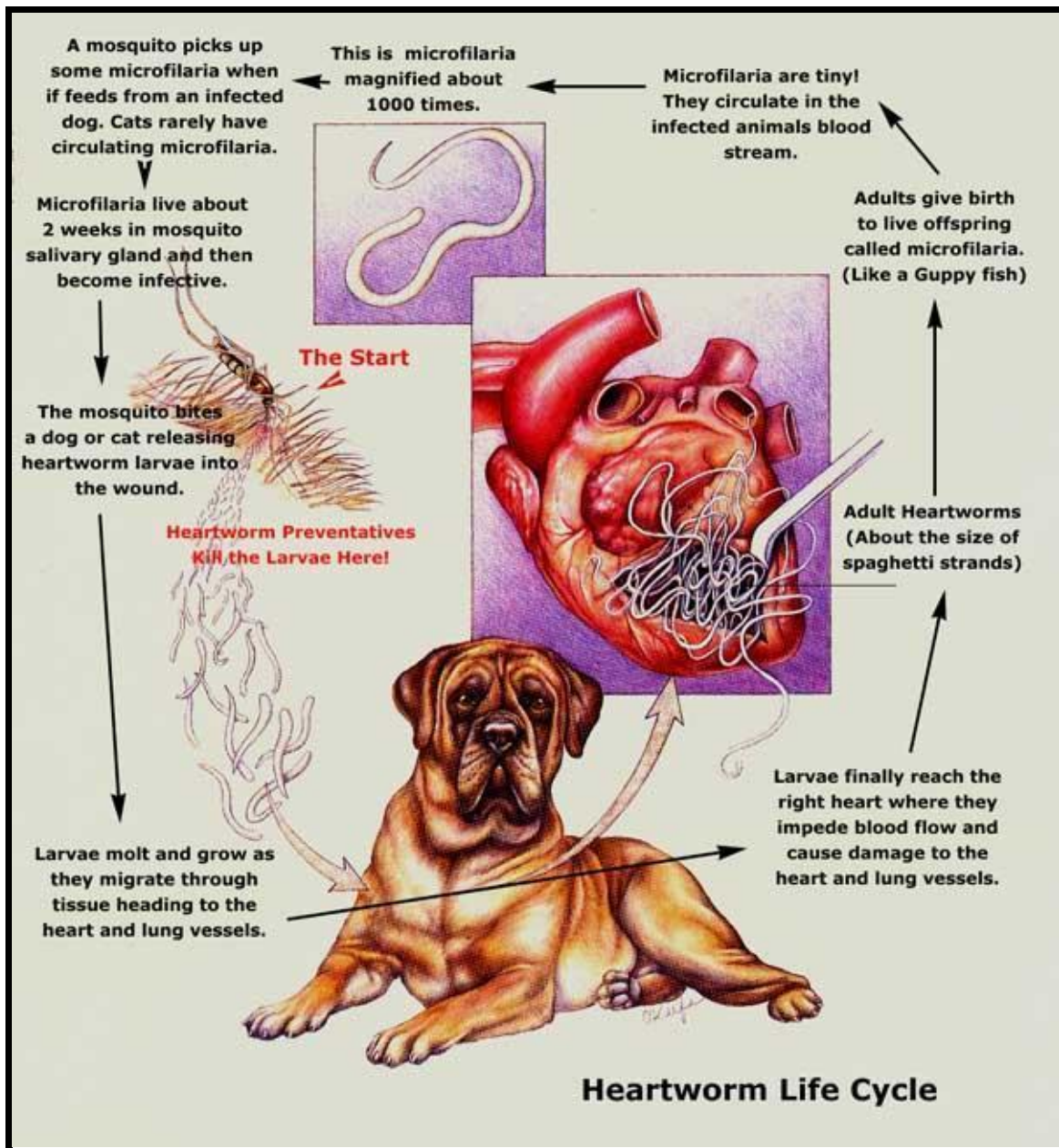
To control a flea infestation it can take up to 12 months, so using flea preventative monthly and regularly is the best option to prevent an infestation. All pets in the home, or living on the property outdoors only, should be treated and bedding should be washed regularly. Sometimes, a cat or dog can be severely allergic, causing hair loss and irritated skin while it's infested with fleas; this is called flea dermatitis and can be present on only one animal in the home with the other animals appearing normal. Therefore, it is recommended to treat all pets, indoors and outdoors, in the home (cats and dogs) to help the allergic pet.

PRCKC has two options for flea preventative: **Advantage Multi** and **Seresto**.

- Advantage Multi can be used to treat dogs (over 3 lbs and 7 weeks of age) and cats (over 2 lbs and 9 weeks of age), and kills adult fleas (but not their eggs or larvae).
 - Dogs that are older than 6 months require a current heartworm test to receive this prescription product
- Seresto is a collar that works like a topical for up to 8 months to repel and kill adult fleas and ticks.

Internal Parasites

Heartworms



What are heartworms?

Heartworms are an internal parasite that infests an animal's heart and vascular system. These infestations are very serious and can be fatal within a very short period of time if left untreated. Heartworm larvae are passed through mosquito bites into the dog's bloodstream. They then travel to

the heart, grow into adults, and will begin to reproduce. They are most commonly seen in dogs, but can also be transmitted to cats. Only mosquitoes can transmit heartworms, so infection cannot pass between animals (dog-to-dog or dog-to-cat). People can become infected with heartworms by mosquitoes but it is very rare.

How do I know if my dog or cat has heartworms?

Unfortunately, visible symptoms of heartworm infestation don't begin until sometime after the dog has become infested. These symptoms can include lethargy, shortness of breath, coughing, and nosebleeds. However, a dog may have heartworms for several months before these symptoms begin, which is why preventative measures are so important. Diagnosis of heartworm disease is typically done through blood tests. Cats are not routinely tested for heartworms because there is no definitive test for it.

How is a heartworm infestation treated?

After diagnosing heartworm disease, expensive, rigorous, and lengthy heartworm treatment is the proper course of action, which may include hospitalization. Treatment of heartworm disease is done through multiple injections of a special medication to kill the adult worms in conjunction with a preventative to kill the larvae. Administration and post care of this medication carries serious risks however, so the pet must be closely monitored and kept quiet and calm for up to six months following the series of injections to prevent complications. It is far safer and cheaper for the animal's health to prevent heartworms from occurring in the first place.

How are heartworms prevented?

A veterinarian can prescribe a simple oral or topical medication that, if given every 30 days as directed, will prevent your dog from heartworm infestation. This is one of the most important things you can do to ensure the health of your pet. Cats can be placed on heartworm prevention without testing because there is no current treatment for the parasite within cats. Heartworm preventative is recommended year round due to mosquitoes being able to hatch on warm winter days.

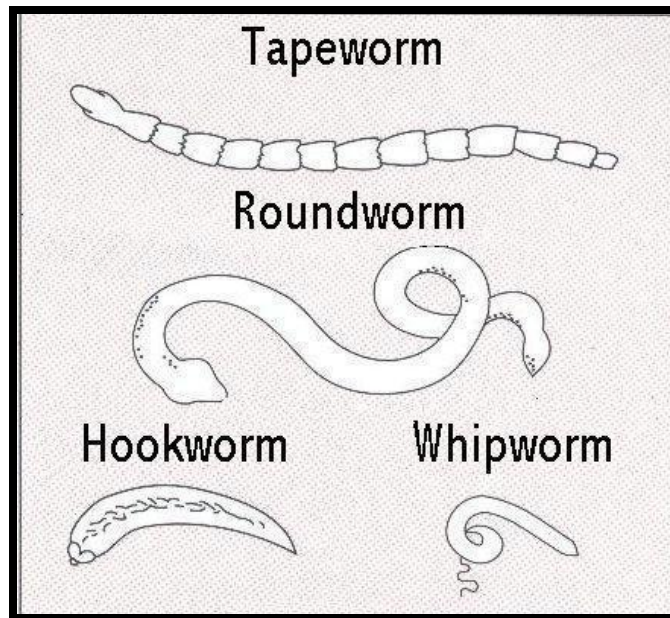
PRCKC only offers one product for heartworm prevention: **Advantage Multi.**

- A current heartworm test and/or regular heartworm prevention are required for all dogs 7 months of age and older for them to receive Advantage Multi. If a dose is missed, a heartworm test should be performed 6 months after the missed dose. The owner can get 6 months of preventative up to that 6 month mark, but not anymore until a heartworm test is performed.

Intestinal Parasites in Dogs and Cats

Dogs and cats have the potential to be infested with several internal parasites. The most common are the roundworms, hookworms, whipworms and tapeworms. Of these four, only two are commonly seen in the stool with the unaided eye: roundworms and tapeworms.

Most worm infestations cause any of these symptoms: diarrhea with or without blood; weight loss; dry haircoat; general poor appearance; and vomiting, perhaps with worms in the vomit. However, some infestations cause few or no symptoms; in fact some worm eggs or larvae can be dormant in the dog's body and activated only in times of stress, or in the case of roundworms and hookworms, until the later stages of pregnancy when they activate and infest the soon-to-be-born puppies and kittens.



Tapeworms appear like dried rice grains around the anus, or they can be alive and look like flat white sunflower seeds. Roundworms look like cooked spaghetti. Hookworms look like short (approximately 2 inches) spaghetti with a ribbon of brownish/red down the body (they are sometimes called the barberpole worm). Whipworms look like whips with a thick body and thin tail.

A fecal test is often required in order to discover which parasite is present, as these worms' eggs can only be detected microscopically.

- **PRCKC does NOT perform fecal tests.** Therefore, we cannot give a true diagnosis of the presence of any of these parasites. We can only go by what the client is describing and/or the presence of tapeworm segments around the anus. If a client is questioning the presence of parasites, tell them that we cannot positively diagnose the problem here and that a full-service vet clinic is their best option. However, we can provide several products to treat and prevent parasites.

Simple Breakdown of Parasites and Products Available at PRCKC

Tapeworms

Description: “Rice-like” worm segments around the anus and/or in the stool.

Transmission: Dogs and cats can get tapeworms through eating fleas while grooming themselves. They can also get them through eating wildlife or rodents infested with tapeworms or fleas. Tapeworms are not passed along by contact with stool, contact with infected pets, or through nursing mothers. Tapeworms are not directly passed to people. They would have to ingest a flea.

Treatment: The medication that PRCKC will typically use to treat tapeworms in both cats and dogs is called praziquantel. This is typically administered at PRCKC in an injectable, oral or topical form. Tapeworms cannot be killed by most typical generic, over-the-counter wormers.

- Cats are charged \$10 for an injection, or by weight for the topical called Profender.
- Dogs are charged depending upon their weight; the larger the dog, the higher the cost
 - The oral dewormer, called drontal plus, is recommended in dogs due to pill size and the injectable can be very expensive in a large dog.
 - Drontal plus can be sent home with the owner and doesn't have to be administered in clinic at either location.

Prevention: To prevent the re-infestation of tapeworms, the client should use good flea prevention, and prevent the pet from catching and eating wildlife or rodents.

Roundworms

Description: "Spaghetti-like" worms of varying lengths. Typically around 3-5 inches long.

Transmission: A large percentage of puppies and kittens are born with small roundworm larvae in their tissues via migration through the uterus. Roundworm larvae can also be transferred to the nursing pup or kitten through the mother's milk. The eggs that the adult worms pass in the stool can re-infest the animal or other dogs and cats if the egg-bearing stool is eaten. Therefore, infected animals can pass this parasite along to other pets in the household. They can also pass them along to humans, so owners should regularly wash their hands when handling stool.

Symptoms: Puppies and kittens with active roundworms in the intestines can have a pot-bellied appearance and poor growth. The worms may be seen in vomit or stool. If not treated in time, a severe infestation can cause death by intestinal blockage or nutritional impairment.

Treatment: There are four products that PRCKC will typically use to treat roundworms in both cats and dogs: Pyrantel pamoate, Advantage Multi, Profender (cats only) or Drontal plus (dogs only).

- Puppies and kittens will receive pyrantel pamoate (oral dewormer) with the purchase of the \$20 booster round. (The package includes DA2PP or FVRCP respectively, and the Pyrantel dewormer) Pyrantel will kill adult roundworms but not the eggs.
- The \$30 rabies round will include a full set of vaccines and a dose of Advantage Multi, which is a flea and heartworm prevention and also treats/prevents roundworms, hookworms, and whipworms.
- Adult dogs and cats can be treated with a dose of Advantage Multi and it lasts 30 days. However, all dogs 7 months of age or older need to have a heartworm test performed to receive this prescription product.
 - Multi for Cats: Flea and heartworm prevention, treats roundworms and hookworms, and treats ear mites.
 - Multi for Dogs: Flea and heartworm prevention, treats roundworms, hookworms, and whipworms.
- Cats and kittens can be treated with a dose of Profender and it lasts for 30 days. Profender kills all species of adult roundworms and some larval species of roundworms.

- All pets being treated for roundworms should have a follow up treatment in 2-3 weeks to assure that we are treating all of the life cycles. Therefore, it is very advantageous for the client to continue using Advantage Multi on a regular basis especially if they are in contact with other pets on a regular basis, such as the dog park, daycare, multiple pet families, grooming, etc. as the Advantage multi works for 30 days versus the oral dewormer which only works for that one dose (approximately 24 hours).
- It will take multiple doses of the pyrantel/drontal plus and Advantage Multi to completely treat as these products only kill the adult worm not the developing larvae or eggs. Meanwhile, the pet continues to be in the contaminated environment i.e. the backyard. Monthly prevention is essential, as well as picking up any poop in the yard daily or multiple times per day.

Prevention: Keeping cats and dogs on Advantage Multi on a monthly basis will both treat and prevent roundworms.

Hookworms

Description: They are very small, thin worms that fasten to the wall of the small intestine and suck blood. These are typically not seen in stool with the naked eye unless a severe infestation is present. A fecal test is best to confirm this parasite.

Transmission: Dogs and cats get hookworms from larval migration in the uterus; from contact with the larvae in stool-contaminated soil; or from ingesting the eggs after birth. As with roundworms, the hookworm larvae can also be transferred to the nursing pup from the mother's milk. Therefore, infected animals can pass this parasite along to other pets in the household. They can also pass them along to humans, so owners should regularly wash their hands when handling stool and clean up poop in the yard daily or multiple times per day.

Treatment: There are four products that PRCKC will typically use to treat hookworms in both cats and dogs: Pyrantel pamoate, Advantage Multi, Profender (cats only) or Drontal plus (dogs only).

- Puppies and kittens will receive pyrantel pamoate (oral dewormer) with the purchase of the \$20 booster round. (The package includes DA2PP or FVRCP respectively, and the Pyrantel dewormer) Pyrantel will kill adult hookworms but not the eggs.
- The \$30 rabies round will include a full set of vaccines and a dose of Advantage Multi, which is a flea and heartworm prevention and also treats/prevents roundworms, hookworms, and whipworms.
- Adult dogs and cats can be treated with a dose of Advantage Multi, and it lasts 30 days. However, all dogs 7 months of age or older need to have a heartworm test performed to receive this prescription product.
 - Multi for Cats: flea and heartworm prevention, treats/prevents roundworms and hookworms, and treats ear mites.
 - Multi for Dogs: flea and heartworm prevention, treats/prevents roundworms, hookworms, and whipworms.
- Cats and kittens can be treated with a dose of Profender and it lasts for 30 days. Profender kills all species of mature/immature adult hookworms and some larval species of hookworms.
- All pets being treated for hookworms should have a follow up treatment in 2-3 weeks to assure that we are treating all of the life cycles. Therefore, it is very advantageous for the client to continue using Advantage Multi on a regular basis especially if they are in contact with other

pets on a regular basis, such as the dog park, daycare, multiple pet families, grooming, etc. as the Advantage Multi works for 30 days versus the oral dewormer which only works for that one dose (approximately 24 hours).

- It will take multiple doses of the pyrantel/drontal plus and Advantage Multi to completely treat as these products only kill the adult worm not the developing larvae or eggs. Meanwhile, the pet continues to be in the contaminated environment i.e. the backyard. Monthly prevention is essential, as well as picking up any poop in the yard daily or multiple times per day.

Prevention: Keeping cats and dogs on Advantage Multi on a monthly basis will both treat and prevent hookworms.

Whipworms

Description: Whipworms are small worms that have a thick body and thin tail like a whip. They normally reside in the cecum (where the small intestine and large intestine meet), and can cause bloody diarrhea with severe infections. Severe infections can look as bad as a parvovirus infection.

Transmission: Dogs and cats get whipworms from stool contaminated soil. They can be passed to humans, so owners should regularly wash their hands when handling stool. Stool should be cleaned up in the yard daily or multiple times per day to prevent reinfestation. It is very difficult to get rid of a whipworm infection in the yard and in animals, so year round prevention is key.

Treatment: There are two products that PRCKC will typically use to treat whipworms in both cats and dogs: Advantage Multi or Drontal plus.

- The \$30 rabies round will include a full set of vaccines and a dose of Advantage Multi, which is a flea and heartworm prevention and also treats/prevents roundworms, hookworms, and whipworms. If a dog has whipworms, it's recommended to continue Advantage multi year round.
- Adult dogs and cats can be treated with a dose of Advantage Multi, and it lasts 30 days. However, all dogs 7 months of age or older need to have a heartworm test performed to receive this prescription product.
 - Multi for Dogs: flea and heartworm prevention, treats/prevents roundworms, hookworms, and whipworms.
 - Multi for Cats: flea and heartworm prevention, treats/prevents roundworms, hookworms, and whipworms.
- Since whipworms are environmentally resistant, it is advantageous for the client to continue using Advantage Multi on a regular basis, especially if in contact with other pets on a regular basis, such as the dog park, daycare, multiple pet families, grooming, etc. as the Advantage Multi works for 30 days versus the oral dewormer which only works for that one dose (approximately 24 hours).
- It will take multiple doses of the Drontal plus and Advantage Multi to completely treat as these products only kill the adult worm not the developing larvae or eggs. Meanwhile, the pet continues to be in the contaminated environment i.e. the backyard. Monthly prevention is essential, as well as picking up any poop in the yard daily or multiple times per day.

Prevention: Keeping dogs on Advantage Multi on a monthly basis will both treat and prevent whipworms.

Spay and Neuter for Cats and Dogs

1. Spay/neuter is the number one way to decrease the number of homeless animals in the future! An estimated 5 to 6 million animals are killed in shelters across the United States each year. Spaying or neutering your pet will decrease these numbers down the road.
2. Fixing pets is cost effective. The price of spay or neuter surgery is much less than the cost of caring for repeated litters of puppies or kittens. There are other costs associated with unaltered animals, such as aggression-related issues, and health risks that can be avoided by alteration.
3. Altered animals do not feel the need to mate so they are less likely to stray from home. By staying close and keeping off the streets, animals that have been spayed/neutered are less likely to get hit by cars or become infected with contagious disease.
4. Spaying and neutering will improve your pet's health and increase his/her life expectancy. Spaying or neutering will not cause your pet to gain weight. A proper diet and plenty of exercise will keep your pet fit and trim.
5. Neutering male dogs decreases the possibility of prostatic disease development and hernias, and eliminates the chance of testicular cancer. Neutering also reduces the risk of prostate enlargement and prostate cancer. When performed before sexual maturity, it also reduces territorial and sexual aggression which can turn into fights, inappropriate urination (spraying or marking) and other undesirable male behaviors. Neutering your male dog or cat also decreases the possibility of perianal tumors and hernias, which are common in intact dogs. The threat of abscesses caused by bites and diseases transmitted by fighting are greatly reduced since neutered cats are less likely to roam.
6. Spaying female dogs decreases the probability of breast cancer. If done before the first heat cycle, spaying decreases the rate of breast cancer to almost zero, and eliminates the threat of uterine and ovarian cancer, which are otherwise common occurrences. Spaying also eliminates pyometra, a potentially fatal infection of the uterus experienced by many intact females. The heat cycle and undesirable behaviors like messy spotting are eliminated after spaying. In addition, since your female will not be in heat, there will be no uninvited suitors in the area!

Mandatory Spay/Neuter in Kansas City

- All American Pit Bull Terriers must be spayed/neutered in Kansas City, Missouri
- All pets must be spayed/neutered in Kansas City, Kansas