

The Secret Life of Internal Parasites

Dr. Maria Berger

Internal parasites refer to the worms and microscopic organisms that attempt to invade and live inside the stomach, intestines and colon of all animals, including our pet cats. While there are many internal parasites in our area, the top four invaders that we find most frequently in the stool samples at Cat Clinic North are: roundworms, tapeworms, hookworms and coccidia. Left untreated, these parasites can cause vomiting, diarrhea, weight loss, anemia, poor hair coats, and occasionally death.



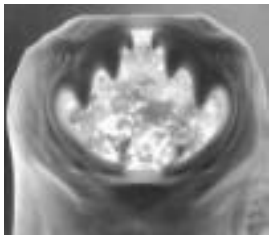
Roundworms: These are whitish worms that look somewhat like a short piece of spaghetti. The most common ways that adult cats become infected are: 1) hunting and eating rodents and 2) grooming their paws after walking on infected soil or kitty litter. Additionally,

kittens are often born infected as baby roundworms can pass directly to the kittens through the placenta. Under certain conditions this parasite can pass from cats to people. Therefore, it is very important that all cats entering a household be dewormed for roundworm. Multiple dewormings are needed since one dose of deworming medicine is not enough to clear the infection.



Tapeworms: These worms are so named because the adult worms resemble a tape measure. They are passed to cats by hunting and eating rodents, or from eating fleas as they groom their fur. This parasite cannot be passed from cat to cat or from cat to human. The most common way to diagnose the presence of

tapeworm is through the finding of small egg packets that resemble rice pieces stuck to the fur around the cat's bottom. Multiple dewormings are needed to clear this infestation.



Hookworms: These are very small worms that are usually between 0.5 to 0.75 inches long. There are two ways for this parasite to be transmitted to our feline friends: 1) eggs in the soil hatch into microscopic baby worms (larvae) that burrow into the cat's skin. (This can also happen to people.) 2) larvae can also pass to kittens through their mother's

milk when they are nursing. These larvae travel through the body until they reach the small intestine where they make their living sucking blood from their host. A large number of hookworms can quickly cause life-threatening anemia in very small kittens. Hookworms cannot be passed directly from cats to humans. As with the above parasites, multiple dewormings are necessary to clear the infection.



Coccidia: This is a one-celled microscopic animal. It can be passed to cats through hunting and eating of prey animals, cat to cat grooming, and the sharing of litter boxes. The cat species of coccidia cannot be passed from cats to humans. This organism is a common

cause of diarrhea in young kittens. Daily medication administered for a minimum of fourteen days is needed to destroy this parasite.

One of the most important things to remember about these parasites is that if they ever find their way into a host animal (in this case our pet cats), we may never get rid of them entirely. Despite our best efforts at extermination, there may always be a very small population of worms or one-celled organisms present. This will not cause a problem in most healthy cats. The thing to remember is that the parasite can make a comeback if the cat becomes ill. Of course, even a healthy cat can become reinfected if it comes in contact with the parasite again. Therefore, we recommend checking annual stool samples on all cats, and routinely deworming cats that go outside.

Tech Tips: Parasites

Lisa McKeiver LVT

Collecting Stool Samples

- Clean litter box 24 hours before collecting stool sample, so you know it's fresh.
- 2" piece is plenty.
- Can have litter on it.
- When using scooping litter, be sure you are collecting stool and not a urine ball.
- You can transport the sample in a Ziploc bag or margarine tub.
- Make sure you label it with the cat's name, your last name and a phone number you can be reached at.
- Check stool samples once a year for indoor cats and twice yearly for outdoor cats.

Preventing and Treating Parasites

- ❖ Do not use over the counter products, they are not usually as effective or safe as prescription products.
- ❖ Deworm outdoor cats every 3-4 months (tapeworms, hookworms, roundworms), especially if you cannot collect a sample.
- ❖ Use preventatives such as Revolution or Heartgard, both heartworm preventatives but also contain wormers.
- ❖ If you have trouble giving the wormer, you can always call us and schedule to bring the cat in and have us give the medication.

Goodbye To Geoff

Niki Zimmerman VA



The Cat Clinic North is unfortunately saying goodbye and good luck to one of our staff members. Geoff Sadek, a veterinary assistant, has left us to go away to college. He is beginning his freshman year at Grand Valley State University. Geoff will be missed, but we wish him all the best for the future!

What's New? "Toxic Treats"

Dr. Jessica Czederpiltz

Although nutritionally the best diet for your feline friend is "boring" cat food, most people cannot help supplementing with the occasional people snack. Here are a few common people foods that recently have received press in veterinary literature as definite foods to avoid.

- **Onions/Garlic** - Any form of onion or garlic (powdered, cooked, fresh) can potentially be toxic to your cat. These foods contain a substance that damages the red blood cells. These cells then die and anemia results. The toxic compound also affects the red blood cell's ability to carry oxygen. Cats are more sensitive to this type of red blood cell injury than dogs. Toxicity may lead to intestinal upset, weakness from anemia, and respiratory distress.
- **Grape/Raisin** - These foods have recently been implicated as a cause of kidney failure in dogs and cats. The sensitivity of individual pets seems to vary widely as does the toxic dose. Toxicologists are still exploring the exact mechanism by which the kidney damage occurs.
- **Chocolate** - Although more common as a dog toxicity. Chocolate can cause problems in cats as well. Mild poisoning can result in intestinal upset and rarely more severe cases can affect the nervous system.

Don't Forget - Milk and other dairy products can cause intestinal upset. Cats are lactose intolerant. If your kitty convinces you they will surely perish without their milk treat, consider "cat-sip", a lactose-free product designed specifically for cats.

CCN Cat Of The Month Boo Boo Lovell Christy Hoyer VA



Boo Boo Lovell is a 9 year old, neutered male domestic shorthair, who has been around the block once or twice. He is also no stranger to Cat Clinic North. Boo Boo has been diagnosed with Autoimmune Hemolytic Anemia, which is a disease where the cat's immune

system is destroying its own red blood cells. If this is left untreated, the cat eventually becomes so anemic that it dies. This process can be very quick or take several weeks. This is not a curable disease, so the cat needs lifelong treatment and monitoring to help it fight the disease and all of the many other complications that can occur as a result of this disease. However in light of these medical problems and complications, Boo Boo has remained a loving and playful boy. He is owned by a wonderful lady named Pat, who has gone above and beyond for Boo Boo. Pat states that that he is the king of the castle. He loves to cuddle and nuzzle your neck. He will tell you when it's time to eat and take his medications. He knows he takes three medicines. If he

spits out one, it still count as one of the three. After three, he won't open his mouth again.

Boo Boo loves to help make the bed; he gets between the sheets and won't move. He rolls up in the blanket and sheets and peeks out. He also loves to help with the laundry, by jumping into the basket and grabbing the towels, as you pull them out to fold them. He will knock over his food bowl when he doesn't like what's in it. He has his choice of two different beds. Boo Boo is truly a fighter and will demand the love and affection he so deserves.

Question Of The Month

What is the difference between purchasing medicine at a Veterinary Hospital as opposed to online?

Dr. Tammy Sadek

The veterinary profession has traditionally prescribed and dispensed most of their patients medicines from their in hospital pharmacies. Occasionally a veterinarian may prescribe a human medication to be obtained through a local pharmacy, or a compounded medication (a medication made into a different form or strength) from a compounding pharmacy.

In recent years, Internet pharmacies have sprung up for pets as well as for people. Most veterinary pharmaceuticals are sold only through veterinarians. Unfortunately, that means that many of the veterinary medications sold on line have been purchased overseas or through illegal channels, and their use involves increased risk to the patient due to labeling and expiration problems.

Regardless of where you purchase medications for your pet, your cat needs regular veterinary examinations. The examinations may be required every 6-12 months depending on the medication. This examination is crucial for your pet's general health, also a legal requirement.

Medications purchased through your veterinarian are eligible for all warranties, rebates and promotions available from the manufacturer. This is not the case with Internet pharmacies.

As to cost, for most medications, the cost from an Internet pharmacy will be about the same as from a veterinarian, especially when shipping and handling costs are added. Occasionally, a medication may be less expensive online, or less expensive through your veterinarian.

We appreciate the opportunity to help your cat with their prescription needs. We endeavor to keep your costs reasonable and will always offer the best medical options for your cat.

C. C. N.'s Welcome Wagon!

Becky Harper VA

We are thrilled to welcome to the clinic our newest feline friends, along with their caring owners. They are listed here in alphabetical order beginning with, Sox Allchin, Kuzco & Tigger Brown, Felix Emerson, Tess



Fabbro, Bousha Gathercole, Soxer Going, Snowbell Grice, Chloe Guetschow, Chelsea Houseman, Tantar Jenkinson, Winston Joyce, Azrielle Link, Nigel & Nina Madden. Smokey Priedits, Gray C Ritzema, Murphy Rop, Buddi Schilger, Cleopatra & Tipper Sisson, Rocky Studer, Elliot Ulven and Kira Williams. We would also like to extend a warm welcome to some of Kentwood Cat Clinic's friends that we were able to enjoy while they boarded with us. They are Rascal Cron, Rollie, Ollie & Basset Harden, Bob & Yetti Kamits, Sapphire Porter and Sneakers Schultz. We are so pleased you chose us to care for your kitty kids and look forward to seeing you all again.

Getting To Know The Staff

Niki Zimmerman VA

June Wolf has been a Licensed Veterinary Technician at the Cat Clinic North and Kentwood Cat Clinic since December of 1997. She graduated from the Veterinary Technician Program at Michigan State University in 1996. Her veterinary medical experience began in 1987 when she started volunteering at animal clinics.

June enjoys working with only cats for many reasons. She likes the smaller size of cats. There is less drooling and noise. And she does not miss dealing with a disease called parvo that dogs get. She also appreciates that focusing on cats only allows for more specific education and training. Her favorite attribute of cats is their purring, that soothing rumble.

June is originally from the Metro Detroit area. She now lives on the Northeast side of Grand Rapids and has for eight years. Her family consists of many "furry people". At home, she has five ferrets named Cadbury, Harami, Nemo, Bella, and Duke ranging in ages from two to six years old. Along with the ferrets, she is owned by three cats. The youngest is five-year-old Butterfly, a domestic medium hair, tortoise shell colored, female who is very, very shy. Zahra is a six year old, domestic shorthair, black and white, obese female. Her eldest cat, Niblet, is a sixteen years old, domestic shorthair, male, orange tabby. Nib, as he is also called, has quite a story. He is currently on twelve different medications to treat hypothyroidism, chronic renal failure, allergies, arthritis, and gastro intestinal issues. In his younger days, Nib was one of our more aggressive patients, but he has mellowed some with age. His full name isn't "Nibble and Bites" by coincidence. Because of Nib, June has gained a lot of understanding for other owners when we need to send home a whole list of drugs for their kitty and also when their normally sweet cat at home turns into a fierce tiger at the vet clinic.

June's hobbies include making stained glass decorations and she is a member of the Midwest Ferret Fellowship which involves educating humans about ferrets. Her favorite vacation destination was when she went to Mesa Verde, Colorado. She visited the stone ruins built into the canyon wall that you can walk through, feeling like you've taken a step back in time. The food she most enjoys is dark chocolate. To her, spring is the best time of year because of all the new growth and it's normally when puppies and kittens are born!

Cuterebra Grubs & Your Cat

Dr. Tammy Sadek



Cats that go outside sometimes become infected with the larvae of the cuterebra fly. This fly usually lays its eggs around rabbit burrows. When the eggs hatch into larva, the larva crawls onto the skin of the rabbit and burrows in. Sometimes out inquisitive cats will stick their head and shoulders into rabbit holes

and have the larva crawl on them. When this happens, the cat develops a large swollen area on the skin with a tiny breathing hole for the larva, now called a "grub". The larvae can get very large. When mature it crawls out of the cat and hatches into a fly. Sometimes the grub dies in the cat's skin causing a lot of pain and infection. Sometimes cats groom off and swallow small larva, which then can burrow into the back of the cat's throat or windpipe. When that happens the cat can have difficulty breathing or even die. So if your cat goes outside, please watch for any swelling or breathing problems.

The Flip Side

The Use of Honey in Wound Treatment

Maria Berger DVM

Egyptian writings as far back as 1650 BC show that honey has long been used to treat various medical conditions. Because of its low water content and high sugar content, honey has an antibacterial effect on wounds. It acts to draw fluids out of the injured tissues, resulting in the dehydration and killing of any bacteria present. As an added bonus, honey also reduces swelling in the damaged tissue, can reduce pain during bandage changes by preventing the sticking of tissues to bandage material, and has an overall soothing effect on the wounded area. In cases where a large area of the skin has been damaged or destroyed, such as burns and physical trauma, honey may play a role in the management of these potentially life threatening problems. Since the use of honey requires multiple bandage changes per day, this is a treatment plan that is best done in a hospital setting.

Please contact Dr. Berger if you have any questions concerning the use of honey in the management of feline wounds.

Help! My cat is urinating out of the box— part 3

Dr. Maria Berger

For the last two months we have discussed some of the medical and behavioral reasons that can cause cats to stop regularly using their litter box. This time we will look at some of the ways we can change the cat's environment to make it more likely that he/she will want to use the box. Treat any medical condition causing the inappropriate behavior first if this is to work.

Left to their own devices, cats naturally seek soft, loamy soil in which to relieve themselves. A healthy cat will bury its waste so as not to attract rivals or predators. By providing large, open litter boxes with unscented, scoop-able type litter, we can come close to what felines use in the wild. Instead of using hoods, which some cats

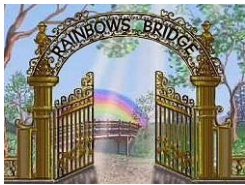
come to find offensive, create an extra large box at home. Large, plastic storage boxes are ideal, and they come in different heights. Many cats will do fine with the shorter versions. For cats that toss litter over the sides, or urinate over the side of the box, the taller variety will be better. If your feline is reluctant to jump into a box that is so tall, you can carefully cut a door in the long side of the box—make it long enough so that the cat can easily enter and exit, but leave a enough height so that a nice deep layer of litter can be added.

The sides are tall enough to help prevent urine from spraying over the edge if the cat does not squat all the way down. In addition, litter from cats that "cover" with great enthusiasm will also remain in the box. A good rule of thumb is to have one box per cat in the house plus one extra. Scoop the boxes daily and change them completely every one to two weeks. Basically, you want the box to be so clean that you would walk in it barefoot! Clean the litter boxes with soap and water; avoid stronger chemicals. Avoid heavily scented litters that some cats may find offensive; a little baking soda can be added for extra odor control. For cats that refuse to use cat litters, potting soil can be added to the box.

In addition to making the box area as attractive as possible to the cat, we need to make the area that the cat is urinating on as unattractive as possible. How the soiled area is cleaned is very important. We need to remove the odor so that the cat, not just the humans, cannot smell any urine. After cleaning with soap and water, an enzymatic cleaner should be applied to the soiled area. Enzymatic cleaners work by breaking down the molecules of urine down to the atom level. By destroying the molecules, the odor is also removed. Avoid ammonia-based products as they mimic the smell of urine. The targeted area must then be thoroughly dried to prevent mold from forming. Cats are very texture oriented; once the area is dry we can make it aversive to them by changing the "feel" of the surface. Plastic carpet runners with the plastic teeth turned up can be very effective. Food bowls can be placed in targeted areas, or bowls filled with non-toxic potpourri can be used. (Most cats so not like strong scents.) Filling a bathtub or sink with a few inches of cold water and ice cubes can be equally dissuasive, for cats that are targeting these areas.

There are many other things that can be done to help persuade kitties to go back to reliably using the box. Behavioral medications can be used if needed as well.

Fond Farewells Becky Harper VA



more than words can express.

Our following friends have crossed over to the rainbow bridge. We would like to say goodbye to Betty Bradley, Halo Bushert, Kitty DeBoer, Taz Hurley, Amber Jones, Precious Kettman, Gus LaSota, Nemo Molina, Punkin Mulcahy, Roscoe Skidmore and Kahlua VanDyken. They will be missed

How To Give Your Cat a Pill?



- Grasp cat firmly in your arms. Cradle its head on your elbow, just as if you were giving baby a bottle. Coo confidently, "That's a nice kitty." Drop pill into its mouth.
- Retrieve cat from top of lamp and pill from under sofa.
- Follow same procedure as in 1, but hold cat's front paws down with left hand and back paws down with elbow of right arm. Poke pill into its mouth with right forefinger.
- Retrieve cat from under bed. Get new pill from bottle. (Resist impulse to get new cat.)
- Again proceed as in 1, except when you have cat firmly cradled in bottle-feeding position, sit down on edge of chair, fold your torso over cat, bring your right hand over your left elbow, open cat's mouth by lifting the upper jaw and pop the pill in - quickly. Since your head is down by your knees, you won't be able to see what you're doing. That's just as well.
- Leave cat hanging on drapes. Leave pill in your hair.
- If you're a woman, have a good cry. If you're a man, have a good cry.
- Now pull yourself together. Who's the boss here anyway? Retrieve cat and pill. Assuming position 1, say sternly, "Who's the boss here, anyway?" Open cat's mouth, take pill and...Oooops!
- This isn't working, is it? Collapse and think. Aha! Those flashing claws are causing the chaos.
- Crawl to linen closet. Drag back large beach towel. Spread towel on floor.
- Retrieve cat from kitchen counter and pill from potted plant.
- Spread cat on towel near one end with its head over long edge.
- Flatten cat's front and back legs over its stomach. (Resist impulse to flatten cat.)
- Roll cat in towel. Work fast; time and tabbies wait for no man-or woman.
- Resume position 1. Rotate your left hand to cat's head. Press its mouth at the jaw hinges like opening the petals of a snapdragon.
- Drop pill into cat's mouth and poke gently. Voila! It's done.
- Vacuum up loose fur (cat's). Apply bandages to wounds (yours).
- Take two aspirins and lie down.