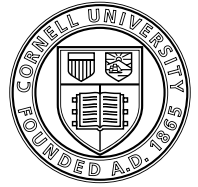




Cat Watch

May 2020 - Vol. 24, No. 5



Expert information on medicine, behavior, and health in collaboration with a world leader in veterinary medicine

THIS JUST IN

FFV in Pumas Rising

The reason is unknown

A study in the January 2020 *Virus Evolution* showed a remarkably high number of puma infected with feline foamy virus (FFV) in California, Colorado, and Florida. The prevalence in pumas exceeds that in domestic cats.

Feline foamy virus infection is largely asymptomatic in domestic cats, although many cats with FFV also have feline immunodeficiency virus (FIV). FFV is common in older stray domestic cats.

According to *JAVMA News*, “Among domestic cats admitted to shelters because of nonowner surrender or that were involved in trap-neuter-return programs, the FFV seroprevalence (percentage of cats testing positive for FFV) was 75.0% in Southern California, 52.4% in Colorado, and 41.9% in Florida. Among pumas, the FFV seroprevalence was 69.1% in Southern California, 77.3% in Colorado, and 83.5% in Florida.”

The cause and the potential impact of FFV infection on the health of both wild and domestic cat populations are unknown. ■



Puma

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Emerging Zoonotic Disease

The prevalence of mycobacteriosis is higher than thought

Feline mycobacteriosis, specifically those infections involving *Mycobacterium* species belonging to the *Mycobacterium tuberculosis*-complex group, is an emerging zoonotic disease (one that can be spread from animals to humans) that is difficult to definitively diagnose. Feline mycobacteriosis includes tuberculosis and mycobacterial infections of wounds.

“Given its zoonotic potential and recent evidence that suggests that its prevalence in the domestic feline population is significantly higher than previously thought—1% of all biopsies submitted for histologic evaluation have evidence of mycobacterial infection—improved methods of diagnosing mycobacteriosis in cats would be impactful,” says Bruce Kornreich DVM, PhD, DACVIM, Director of the Cornell Feline Health Center.

A recent study proposes a panel of cytokine/chemokine assays that may be useful in discriminating those *Mycobacterium* infections that have zoonotic potential from those that do not. While further work is needed to validate the diagnostic usefulness of this assay, this study lays the groundwork for a potential improvement in our ability to diagnose these diseases. ■

Sci Rep. 2018 Nov 23;8(1):17314. doi: 10.1038/s41598-018-35571-5.



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Aftermath for Cats Injured in Wildfires

Burns and smoke inhalation raise incidences of heart disease

Cats who suffered burns and smoke inhalation in recent California wildfires also had a high incidence of heart problems, according to a study from the University of California, Davis. Researchers studied 51 cats referred for treatment after the 2017 Tubbs Fire in Santa Rosa and the 2018 Camp Fire in Paradise. Echocardiograms found that the cats had a much higher incidence of heart muscle thickening and blood clot formation.

More than half of the cats had heart muscle thickening and close to 30 percent had blood clots or were found to be at high risk of developing blood clots. If cats develop blood clots, they are at high risk of sudden death. Six of the cats in the study died or were euthanized due to cardiac issues, while 82% percent survived.

People also experience cardiovascular changes after burn injuries. With humans, the more severe and extensive the burn, the higher the risk of cardiovascular changes. In the cats, the incidence of cardiac changes was higher than that reported in humans and occurred in cats with moderate and severe burns. This study highlights the importance of screening cats involved in fires for cardiac disease. ■

Sharpe, AN, et al. Cats with thermal burn injuries from California wildfires show echocardiographic evidence of myocardial thickening and intracardiac thrombi. *Scientific Reports*, 2020; 10 (1) DOI: 10.1038/s41598-020-59497-z. *Science Daily*.



The Tubbs fire devastation.

ANW | iStock Photo

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Two New Flea-Control Drugs

FDA Approves Credelio and Selarid

Two flea control products recently received FDA approval for use in cats 8 weeks of age and older. Both require a prescription from your veterinarian.

Credelio (lotilaner) is a monthly chewable tablet for the treatment and prevention of flea infestations (*Ctenocephalides felis*). Selarid (selamectin) is indicated for flea infestations (*Ctenocephalides felis*), prevention of heartworm disease caused by *Dirofilaria immitis*, ear mites (*Otodectes cynotis*), intestinal hookworm (*Ancylostoma tubaeforme*), and roundworm (*Toxocara cati*) infections. ■



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Phenobarbital Transdermal Application

This owner-preferred method requires more bloodwork

Seizure medications tend to be lifelong treatments, but pilling most cats is not a pleasant experience for the cat or the owner. A study published in the *Journal of Feline Medicine and Surgery* looked at the transdermal (medication absorbed through the skin) application of the epilepsy medicine phenobarbital as an alternative.

Nine cats who were receiving phenobarbital for presumptive idiopathic epilepsy and had no deleterious effects from that drug were selected for the study. For the first 14 weeks, all the cats received their phenobarbital dosage orally. For weeks 15 through 28, the cats received transdermal phenobarbital (higher concentrations of the medication were used for the transdermal approach). Blood was drawn to verify blood serum concentrations at weeks 2, 14, 16, and 28 weeks, and dosages were adjusted.

When cats received phenobarbital orally, there was good correlation between the dose and the blood serum concentration. While on the transdermal therapy, however, there were more problems getting the dosage adjusted properly, so more bloodwork was necessary.

Still, despite the need for more frequent bloodwork, six of the nine cat owners preferred the transdermal application. If considering this approach, it's important to understand that compounding pharmacies vary in their ability to create consistent batches of medication, making bloodwork checks important. ■

J Feline Med Surg. 2019 Dec;21(12):1181-1187. doi: 10.1177/1098612X18823577. Epub 2019 Jan 28.



Lead_Zaner | iStock-Photos

Cachexia Worsens the Prognosis

Cats with heart failure and cachexia tend to have shorter lives

Dramatic muscle loss, called "cachexia," is a syndrome observed in patients suffering from heart failure and other diseases, including kidney failure and cancer. A retrospective study performed at the Cummings School of Veterinary Medicine, Tufts University, evaluated cats with heart failure to see if cachexia was truly a symptom in cats with heart problems and then looked at things like its prognostic value. All the cats in the study were spayed or neutered; average age was 10 years. Of the 125 cats evaluated, 107 had hypertrophic cardiomyopathy. The others had various other forms of cardiomyopathy.

The researchers classified cats as having cachexia if they showed unintended weight loss of 5% or more, low body condition scores, low muscle condition scores, and whether they were on a prescription appetite stimulant.

Cats classified as cachectic had a less optimistic prognosis and shorter survival times, especially if the cachexia was determined by muscle conditioning scores. The research emphasizes the need to address cachexia in cats suffering from heart failure. ■

J Vet Intern Med. 2020 Jan;34(1):35-44. doi: 10.1111/jvim.15672



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Feline Panleukopenia

This “feline distemper” can spread rapidly

Feline panleukopenia, sometimes referred to as feline distemper or FPV, is a feline parvovirus. Like other parvoviruses, this virus attacks rapidly dividing cells, such as those in a kitten's bone marrow or intestines. Panleukopenia can wipe out immune-system cells, making affected cats more susceptible to other infectious diseases.

This virus is ubiquitous in the environment and very resilient, remaining viable for weeks to months. FPV is highly infectious and spreads rapidly through fecal material, urine, and nasal discharges. These qualities make catteries and shelters the perfect setting for outbreaks, and susceptible cats and kittens may become infected even after thorough disinfection of the area.

Panleukopenia virus enters a susceptible cat either by inhalation or orally. The virus starts to replicate in the tonsils and the tissues of the mouth. Next, it gets into the bloodstream. Clinical signs of illness tend to show up three to five days later, once the virus reaches target tissues. Luckily, there is a vaccine.

Symptoms

Severe diarrhea is the most obvious clinical sign. High fevers and vomiting may precede the diarrhea, along with anorexia and profound lethargy. Owners may report that their cat sits by the water but does not drink. Abdominal pain may be present.

Kittens infected in utero often develop cerebellar hypoplasia. They will exhibit ataxia (a lack of muscle control and coordination) that will not resolve. This is generally evident by about three weeks of age in affected cats. It is important to note, however, that although affected cats will show these signs for life, they can live happy lives provided that owners take measures to prevent their being injured by their disability and have them examined by a veterinarian regularly. Retinal problems also may be noted.

Kittens can receive passive immunity in the form of antibodies from their queen's early mammary secretions (colostrum) if the queen has developed an effective immune response to this virus. Mortality rate is high in unprotected cats and kittens. The highest mortality, up to 90%, is seen in kittens

up to 12 months of age, especially if they did not acquire maternal antibodies via colostrum ingestion.

Diagnosis

Diagnosis is achieved via antigen testing of fecal material. False negative results are common with these tests, as virus is only shed in the stool for a short time. A simple complete blood count (CBC) will often show very low concentrations of all the blood cells due to bone marrow damage. Rapid screening tests for canine parvovirus may also pick up cases of this feline parvovirus.

Treatment

There is no specific therapy for cats infected with feline panleukopenia. Instead, symptomatic and supportive care is important. Intravenous fluid for hydration and electrolyte balance is the most effective treatment. Dehydration can be severe and may be fatal.

With the intestinal barriers destroyed, many cats will get bacteria in their bloodstreams (septicemia), so antibiotics are recommended to fend off this possibility. Plasma or whole blood transfusions, B vitamin supplementation, and parenteral nutrition (nutrition provided intravenously) may also be helpful in some cases.

Feline recombinant interferon omega may be helpful, as can anti-FPV serum, but these have not been thoroughly tested in cats at this time. Feline recombinant interferon omega is not currently FDA-approved for cats, but this type of treatment has been shown to be effective in some cases of canine parvovirus infection.

Prevention

FPV vaccine is a core vaccine that is recommended for all cats. Modified live vaccines should not be used in pregnant queens or on very young kittens. The standard vaccine protocol is to vaccinate kittens at 8, 12, and 16 weeks

Canine Parvo Is Similar

The feline version of parvovirus (FPV) is similar to the canine version. Currently, the dog virus can infect cats (although not common in North America) and the feline version can infect dogs, but in this case, there is no viral shedding. Large cats, including bobcats, lynx, lions, and tigers, and some wildlife species such as raccoons and mink can be infected with FPV. At this time, FPV has not been shown to infect humans.

of age, with booster vaccines at 1 year of age. One study, done by Ron Schultz PhD while at Cornell, showed that even with inactivated vaccine, immunity to FPV may last seven years or more in some cats. However, standard recommendations suggest a booster every three years out of an abundance of caution.

FPV is resistant to many common disinfectants, but it can be inactivated by products that contain peracetic acid, formaldehyde, sodium hypochlorite, or sodium hydroxide.

Isolation is important if you have a cat with FPV. The virus can be spread via bedding, food and water bowls, and even via your hands and clothing if you have handled sick cats. Parasites like fleas can also spread the virus within a colony of cats. Infected cats who recover should be thoroughly bathed to help eliminate any virus on their fur.

Always assume that stray cats are potentially infected with FPV. They should be isolated and vaccinated. Even indoor-only cats should be properly vaccinated. If you foster or volunteer at a shelter, make sure your own cats are properly immunized and practice good hygiene and isolation procedures. ■



Disease can spread quickly among cats, which is why vaccination is so important to their health.

Watch for Early Constipation Signs

Treatment may prevent potentially serious problems

Constipation is a relatively common problem in middle-aged to older cats. Male cats tend to be at a slightly higher risk. Causes can be as simple as dietary upset or a lack of water or can be due to tumors or infection (see sidebar).

Most normal cats have one to three bowel movements per day. Learn what is normal for your cat. This can be a challenge in a multi-cat household, but you may find that cats have preferential litterboxes for eliminating, which can help you with “who did what.” Otherwise, if you notice there are fewer stools when you clean litterboxes, you may need to separate cats for a day to determine which cat may be ill.

If you notice your cat straining in the litterbox, your first concern should be urinary obstruction, which is an immediate veterinary emergency. If you see that there is plenty of wet litter but no fecal material, constipation is more likely. If your cat goes 48 hours without defecating, he needs veterinary attention.

Understanding Constipation

In a constipated cat, the colon—the section of the lower intestine that functions as a reservoir for undigested food, mucus, bacteria, and dead cells prior to evacuation—becomes impacted with feces that will not budge. Stool that is retained for too long can become hard and dry and difficult to move.

A constipated cat will usually strain to defecate and may cry out while trying to pass hard stool. Sometimes a cat will pass a small amount of liquid stool that gets past the hardened fecal material. Very hard stools with blood are a telltale sign of constipation. Some cats will start to avoid the litterbox since they associate it with pain, so watch for straining behaviors at any time. Over time, constipated cats may become lethargic, depressed, and may vomit.

Diagnostics

Diagnosing constipation, obstipation (severe chronic constipation), or megacolon requires a trip to the veterinarian. Your veterinarian will palpate your cat’s abdomen, attempt a gentle rectal examination, and may take radiographs to see where the blockage is and how severe it is. Abdominal



Some tailless Manx cats may develop fecal incontinence or constipation due to congenital nerve damage to the colon and/or rectum.

ultrasonography may be used. Urine and bloodwork may be evaluated to rule out underlying health problems and determine if your cat is dehydrated.

Treatment

Mild constipation, if caught early, often can be successfully treated. Treatment normally starts with hydration, which may include intravenous (IV) fluids. Milder cases may recover with subcutaneous (under the skin) fluids.

Oral laxatives, which draw water into the colon and soften the stool, can be beneficial in some cats. Others may need a pediatric or warm-water enema to soften the stool so that it can pass. Sometimes, gentle massage is required to stimulate elimination and/or to break up firm masses in the abdomen. Care must be taken to prevent any tears of

the intestines. Some cats may need to be sedated so that hard fecal material can be manually removed through the rectum.

Homework

Once your cat is home, you will need to maintain your cat’s hydration with clean, fresh water available 24/7 (wash the water bowl regularly). Some cats will drink more if you leave a faucet on with a slow drip or use a commercial cat fountain.

Canned foods provide more water than dry kibble, so using these can be helpful. If you are feeding kibble, you can add low sodium broth (no onion or garlic flavoring, please!), water from canned tuna, or warm water.

Small amounts of insoluble fiber also can help. Your veterinarian may suggest psyllium (Metamucil), plain canned pumpkin, coarse wheat bran, or a prescription diet that can aid in preventing constipation. Some cats do best with high fiber diets (more than 20% fiber as fed), which can stimulate the colonic smooth muscles to contract. These can act as “bulk” laxatives.

Since being overweight predisposes cats to constipation, regular exercise and weight loss are important for constipated cats that are overweight or obese. Try to schedule play/exercise time every day for your cat (who doesn’t enjoy playing with their cat?). Work with your veterinarian to develop a healthy weight-loss program, and consider downloading Purrfect Weight, a feline weight-loss iPhone app recently released by the Cornell Feline Health Center, if you have an iPhone. This can be found in the App Store at <https://tinyurl.com/Cornell-Purrfect-Weight>.

If hairballs are the cause of the

Common Causes of Constipation

- ▶ Pelvic injury
- ▶ Joint pain
- ▶ Dietary upset
- ▶ Infection
- ▶ Nerve damage
- ▶ Stress
- ▶ Hairballs
- ▶ Indiscriminate eating causing blockage
- ▶ Intestinal and abdominal cancers
- ▶ Obesity
- ▶ Perineal hernias
- ▶ Intestinal intussusceptions
- ▶ Medications
- ▶ Electrolyte imbalances
- ▶ Dehydration
- ▶ Decreased colon motility

Ensure Adequate Hydration

Dehydration can cause hard stools. Your cat should always have plenty of fresh, clean water available. If you have several cats, provide multiple water bowls so no cat can control this resource and prevent other cats from drinking. Older cats may need water bowls moved to accommodate changes in mobility. Watch for oral diseases such as ulcers, periodontal disease, or broken teeth that may cause drinking water to be painful.



Many cats prefer moving water. A dripping faucet may do the trick, but it is often easier on your plumbing and water bill to purchase a commercial water fountain.

What You Can Do

- ▶ Learn your cat's normal bowel habits
- ▶ Normal feline stools are soft (but not liquid), brownish, well formed, and moist on the outside
- ▶ Keep your cat at a healthy weight
- ▶ Watch for straining
- ▶ Know that vomiting can be a sign of constipation
- ▶ Keep a close watch if you see diarrhea or small amounts of liquid stool in the litterbox
- ▶ Keep fresh, clean water in easily accessible areas
- ▶ Consider adding wet food to your cat's diet

blockage, groom your cat more frequently and discuss the possibility of shaving a long-haired cat with your veterinarian if she resists grooming.

Lastly, your veterinarian may suggest the routine use of medications that increase intestinal motility or laxatives. Follow instructions exactly, and do not give one cat's medication to another cat without veterinary approval.

Serious Cases

Cats with obstipation or megacolon (a very dilated, flaccid colon with poor motility) usually require more intensive therapy. Obstipated cats often have some

permanent loss of intestinal function. If the condition is chronic, the colon will usually dilate or enlarge, leading to megacolon and/or secondary nerve dysfunction. At this point, the cat usually becomes unable to evacuate its bowels, which can cause bacteria to leak from the bowels to the bloodstream (septicemia), a potentially fatal condition.

With megacolon, the affected intestinal wall may develop ulcers and be inflamed, increasing the risk of septicemia and perforation, which can be fatal. Surgery to remove the affected section of the colon is usually recommended in extreme cases.

Post operatively, cats that have such surgery may suffer from diarrhea for up to six weeks. The good news is that anal tone and reflexes are not commonly affected, so long-term incontinence is not common. ■

RESEARCH

Inconsistent Cat Food Foils Study

Manufactured cat food lacks consistency

Things don't always turn out the way you expect. A study that set out to measure how much wildlife domestic cats eat to supplement the food they are given by their owners was unsuccessful due to an unexpectedly high variability in cat food ingredients. This accidental discovery suggests that some cat food manufacturers regularly change ingredient composition, even within the same flavors.

Feral cats are responsible for several native wildlife declines, like the Key Largo woodrat, but the impact of pet cats on urban wildlife isn't well understood. This inspired a collaborative study at North Carolina State University to directly measure how often pet cats eat outside of their food bowls.

A common way to understand the composition of animal diets is to collect samples of fur, nails, or blood from an animal and analyze its carbon and nitrogen isotopes. All organic materials contain isotopes of elements that get locked into body tissues, following the basic principle that you are what you eat.

For this study, researchers collected isotopes from things a cat might eat, including different brands and flavors of cat foods. They predicted cats that only ate from their food bowls would have an identical isotopic match to the food, while a cat

supplementing its diet with wild prey would have variances. As it turns out, that is not the case.

The carbon and nitrogen isotopes in cat foods varied widely, even between foods that were the same flavor and from the same brand. The only clear relationship found was that the least expensive cat foods had higher carbon values, indicating a strong presence of corn product in inexpensive cat food. ■

McDonald, BW, et al. High variability within pet foods prevents the identification of native species in pet cats' diets using isotopic evaluation. *PeerJ*, 2020; 8: e8337 DOI: 10.7717/peerj.8337



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Feeding Hyperthyroid Cats

Iodine restriction may help; weight loss is a high priority

Hyperthyroidism is a common condition in older cats. Symptoms include weight loss, muscle wasting, increased appetite, increased thirst and urination, vomiting, unkempt appearance, and sometimes hyperactivity. You may feel a lump on your cat's throat under his jaw.

In 98% of cases, that thyroid-gland enlargement is the result of a non-cancerous tumor called an adenoma. (Thyroid carcinoma is found in 2% of cats. About 70% of cats have both lobes of the thyroid gland affected.) When the thyroid gland becomes enlarged, it can go into overdrive and produce too much thyroxine, which is the hormone commonly called T4. Thyroxine is important in metabolism and an increased production of T4 is what causes the signs of feline hyperthyroidism.

Combating Weight Loss

Hyperthyroid cats break down the protein in their own muscles to fuel their bodies' increased metabolism. Cats suffering from hyperthyroidism can become emaciated if not diagnosed and treated promptly.

Tell your veterinarian which food(s) you are feeding and how much you are feeding so that he or she can ensure that the diet should help your cat gain weight and muscle mass while medical treatment is started. Any dietary changes made at this point will likely need to be continued

Treatments

The Cornell Feline Health Center highlights several treatment options for hyperthyroid cats:

- ▶ Radioactive iodine therapy (the current gold-standard treatment)
- ▶ Methimazole therapy
- ▶ Dietary iodine restriction
- ▶ Surgical removal of the thyroid gland (not commonly pursued)

For more information, go to <https://tinyurl.com/FelineHealthCenterHyperthyroid>



Hyperthyroid cats often lose weight even with an increased appetite.

even after your cat's thyroid hormone levels have normalized, because it can take months to rebuild lost muscle mass.

The 2014 article "Dietary Management of Feline Endocrine Disease," published in *Veterinary Clinics of North America: Small Animal Practice*, was co-authored by Mark E. Peterson, DVM, Dip. ACVIM, director of the Animal Endocrine Clinic in New York City and adjunct Professor of Medicine at the New York State College of Veterinary Medicine, Cornell University and Cornell graduate Laura Eirmann, DVM, Dip. ACVN.

In this article, Dr. Peterson and Dr. Eirmann recommend that the ideal diet for a hyperthyroid cat should be relatively high in high quality protein and low in carbohydrates. It also should be low in phosphates if the cat has or is at risk for kidney disease, which is common in older cats and is often diagnosed in those with hyperthyroidism.

Protein and Carbs

Dr. Peterson and Dr. Eirmann recommend that a hyperthyroid cat's diet should be 40% protein. This high protein concentration is recommended because hyperthyroid cats often suffer from sarcopenia (muscle loss) for two reasons: age-related changes and the increased metabolism caused by hyperthyroidism.

Senior cats also don't digest protein as readily as younger cats, so it is important to provide lots of easily digested protein from animal sources. Look for meat or meat byproducts among the top five listed ingredients, and keep in mind that canned food generally has higher protein content than dry food. Canned food also

increases your cat's water intake.

A diet with less than 15% carbohydrates is recommended to help stabilize the cat's blood glucose levels around mealtimes, which is beneficial because hyperthyroid cats can develop diabetes. Again, canned food is usually a better fit than dry food.

Carb percentages aren't standard on cat food labels, but they're easy to figure out: "Add the percentages listed on the label for protein, fat, fiber, moisture and ash. Ignore the other listed amounts, as these will be for minerals included in the ash percentage or be so small as to not affect the calculation. Subtract this number from 100 to get the carb percentage on a wet matter basis," says feline-nutrition.org.

Keep in mind that low-carb diets often contain a high percentage of fat. This is great for underweight cats who need the extra energy to regain weight, but it means that you will need to monitor your cat's weight as his health stabilizes to make sure he does not become overweight.

Iodine Restriction

Iodine, an essential nutrient that must be supplied in the cat's diet, is required to produce thyroxine; and one treatment option for feline hyperthyroidism is the restriction of dietary iodine.

Hill's Y/D Prescription Diet is an iodine-restricted diet, and studies have shown that this diet can help to maintain normal thyroid hormone levels in hyperthyroid cats. In some cases, though, it may not resolve all the clinical symptoms. Dr. Peterson and Dr. Eirmann have expressed concern that Y/D diet (particularly the dry formula) may not be nutritionally complete and balanced for long-term use, but it can be a useful option for owners who do not wish to pursue radioactive iodine therapy and for cats that do not tolerate methimazole (a drug commonly used to treat feline hyperthyroidism).

Most importantly, for this diet to be effective, it must be the only thing that the cat eats. Any treats, table scraps, or food stolen from another pet may result in increased dietary intake of iodine, precluding effectiveness of this treatment option.

The health effects of an iodine-restricted diet in cats with normal thyroid levels have not been determined, so Y/D should not be fed to a healthy cat with normal thyroid levels. ■

Cats in Tight Places

How to humor your cat when he decides to hide

Cats have a talent for disappearing, especially when we need to give a medication or take them somewhere. As frustrating as this can be, hiding is a basic survival technique.

Why Cats Hide

Although domestic cats have been living in harmony with humans for many years, they still have natural instincts that are necessary for survival in the wild. Hunkering down in a small space gives your cat shelter from potential predators, allowing him to eat or sleep without needing to watch his back.

“Cats like small spaces because they are quiet, less chaotic, and away from potential external threats,” says Pamela J. Perry, DVM, PhD, Cornell ACVB Behavior Resident. “It is also possible that tight spaces remind a cat of his/her nest (the place where he/she was born). These small secluded areas help cats feel more secure as well as provide them with warmth and comfort.”

Pay attention to your cat’s favorite spots and consider the strategic advantages of each one. For example, a cat tree provides a great lookout. The pillow at the head of your bed is both comfortable and up against a solid structure, minimizing the directions from which someone can sneak up on him.

Cats also hide when they are sick, likely for the sense of security, like us curling up in a thick, cozy blanket on the couch. When cats don’t feel great, they want to alleviate that discomfort. As you probably know, cats are stoic, and often the only sign that something is wrong is that the cat is hiding more than usual.



Dr. Perry’s cat, *Pipper*, making himself at home on a cabinet shelf.

Favorite Spots

Prime hiding spots are small enough for a cat to fit into but too small for potential predators. They often have some sort of wall to provide cover and are dark enough to make it harder for a predator to see while capitalizing on the cat’s excellent night vision.

“Cats are ingenious when it comes to hiding,” says Dr. Perry. “Some common areas include inside closets or cabinets, under furniture, on top of a bookcase, behind the refrigerator, and even inside a box-spring mattress.”

Cats have been found behind pipes under the sink. This spot can be extra sneaky, as small cats can tuck themselves up on top of/behind the bending pipes. Closets add multiple levels of dark, secure hiding places (back corners, shelving).

Laundry baskets are cozy, confined, and may smell like you or be warm due to

clothes recently removed from the dryer. Boxes can be a favorite toy and hiding place for cats. If your cat has a particular affinity for boxes, always check to be sure they’re empty before storing or recycling.

Cats naturally like to climb for both security and a better view, so Christmas trees are a dream playground (avoid fragile ornaments!). Large indoor plants also make good hiding spots. We recommend checking that plants aren’t poisonous (<https://tinyurl.com/FelineHealthCenterPoisons>) before adding any to your house.

Attics and basements don’t get much traffic, so they’re quiet. Plus, they often contain lots of boxes and extra furniture among which to hide.

“Keeping a closet open with some bedding tucked inside may entice a cat to use the space,” says Dr. Perry. “Often a cardboard box will suffice for meeting the cat’s need for hiding. Leaving a cat carrier open with bedding inside not only provides a comfortable resting area, but also allows the cat to become comfortable with the carrier,” she says.

Finding Your Cat

Teach your cat a basic recall by always calling him for mealtimes, treats, and/or playtime, so he associates your call with positive experiences. Then, when you need to find him quickly, call him the same way and he is likely to respond.

If you still can’t find your cat, systematically search your house. Use a flashlight in dark areas. Even if you don’t notice your cat’s body, his eyes may reflect the light. And don’t forget to look up! “If the search is futile, then owners should look inside cupboards, closets, drawers, and the washing machine and dryer,” says Dr. Perry. ■



Sometimes, you may wish he could answer the question, “How did you manage to DO that?”

Mealtime Security

Humans are social eaters, so we tend to line our cats’ food bowls up next to each other in the same room. This works with some cats, but not all. If you have several cats and they don’t always get along, you may notice that the cat lower on the totem pole eats less or tries to angle himself so that he can see if another cat approaches while he eats. Separating the bowls into different rooms and potentially putting them higher up will help cats lower in the pecking order to feel more secure while eating.



A cat’s choice may not look comfortable to us, but it’s not our choice. Dr. Perry’s *Goose* appears to be pretty pleased with himself.

Feline Behavioral Drugs

This class of drugs is in its infancy

Q We have 11 special needs cats. One has obsessive compulsive disorder licking, hypersensitivity, and aggression. Our veterinarian prescribed neurotin, Prozac, and amitriptyline, but none of these seemed to work.

I am a registered nurse and would like to try Effexor (venlafaxine), but do not know if this will be helpful. This rescue cat is blind in one eye, and she attacks another cat that we have all the time. Our house is large and we have given each cat room to get away from each other. We have tried CBD and calming pheromones, and these did not work.

Do you have any thoughts about trying this drug?

A Thanks for getting in touch, and for your wonderful care and concern for these special kitties.

I'm very sorry to hear that you are having this problem, as I know that addressing these types of behavioral issues can be challenging.

The first thing to point out is that our knowledge of the use of drugs to modify feline behavior (psychopharmacology) is in its infancy. There are, in fact, no FDA-approved behavioral drugs for use in cats. While some studies describing the effects of various compounds (i.e. dexmedetomidine, trazadone, gabapentin, and venlafaxine) on feline behavior have been published, these



Cats spend a lot of time grooming, but when licking results in lost hair or sores, it's no longer normal and could become a big problem.

generally involve small numbers of cats, and, in many cases, these effects have been investigated with a focus on minimizing stress in the veterinary environment rather than on behaviors such as aggression and obsessive disorders.

This does not mean that some of these drugs may not ultimately be proven beneficial for the application you are referring to, but rather that in trying to determine the risk versus the benefit of using such drugs for these purposes, we still need more information to be sure.

Extra-label use of drugs refers to the use of drugs in a manner that is not in accordance with label directions, and since no drugs have been approved

for such use, the use of any drugs as psychopharmacologic agents would be, by definition, extra-label use. It's important to understand that extra-label use may be appropriate (this is not uncommon in veterinary medicine), but also that owners should understand the inherent risks in this type of application.

With respect to the use of venlafaxine in cats, we don't have much information about how it is absorbed or eliminated when orally administered to cats, but a published study that reviewed the use of this drug to address periuria (urinating in places other than the litterbox) in 13 cats showed that 11 of them responded favorably, with four of these ultimately relapsing. Side effects reported in this retrospective study included decreased appetite, increased anxiety, and sedation.

If you haven't done so already, consultation with a veterinary behaviorist would be a good idea. Board-certified veterinarian behaviorists are best equipped to provide recommendation in feline behavior cases. In some cases, behavioral modification may be sufficient to address feline behavior problems, but in some, the combination of behavioral modification and the use of psychopharmacologic drugs is necessary.

I hope that this is helpful. Best of luck, and please drop us a line with an update when you can. Again, thanks so much for your obvious love of and concern for your special kitties.

All my best,
Elizabeth

© HAPPENING NOW...

Elizabeth works with the Cornell Feline Health Center to provide answers on this page (vet.cornell.edu/fhc/). Write to her at catwatcheditor@cornell.edu or CatWatch



535 Connecticut Ave., Norwalk, CT 06854. We welcome digital photos of your cat to consider for use with your question.

Coming Up ...

- ▶ How Vaccine Decisions Are Made
- ▶ Stop Scratching on Everything!
- ▶ Help for Kitties with Bad Breath
- ▶ The Eyes Have It in Cats

New Paws—A female cat in Russia that lost all four of her paws to frostbite can walk, run and even climb stairs again, according to *Live Science*. The cat's paws were replaced with four 3D-printed prosthetics made from titanium.

Customs No-No—A passenger from Beijing arrived at Dulles International Airport with a package with a picture of a dog and cat on it. The passenger said it was cat food. Savvy U.S. customs agents weren't fooled, opening the package to find illegal dead birds, says *USAToday*.

Museum Worth Visiting—The Feline Historical Museum, located in the Cat Fanciers' Association's

headquarters, stores the largest collection of cat memorabilia in America. Dayton.com says the Alliance, OH, museum is about an hour from Cleveland. It includes fascinating, rare artifacts, like the cat house designed by architect Frank Lloyd Wright.

Generous Kid—A 10-year-old boy in Bloomsburg, Pa., requested that all his birthday money go to the local cat cafe, Cat in Bloom, according to Channel3000.

com. He raised over \$500, some of which will help a cat with a broken leg. "When they're not adopted and they're still here I want to make sure they have a happy time here," said young Ivan Troychok. ■

