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Cat Watch

Cornell University
College of Veterinary Medicine
Feline Health Center

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

THIS JUST IN

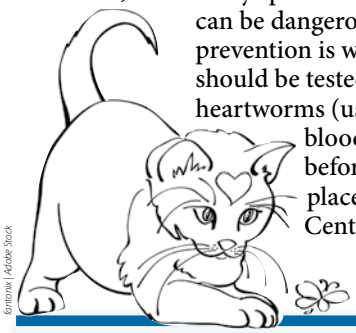
Heartworm in Cats

Transdermal preventative

Centragard (eprinomectin and praziquantel transdermal solution) was approved by the FDA in April and is now on the market. This drug is used to prevent heartworm disease caused by Dirofilaria immitis, which is spread through the bite of mosquitoes. It is applied monthly. Centragard is also approved for the treatment and control of roundworms, hookworms, and tapeworms in cats and kittens 7 weeks of age and older and weighing at least 1.8 lb.

The American Heartworm Society states that, "The cat is an atypical host for heartworms, and most worms in cats do not survive to the adult stage. Cats with adult heartworms typically have just one to three worms."

However, due to the small size of a cat's heart, one or two worms may cause heart problems and/or serious respiratory problems. Symptoms include coughing, lethargy, weight loss, poor coat condition, and bloody sputum. Treatment can be dangerous, so prevention is wise. Cats should be tested for heartworms (usually a blood test) before being placed on Centragard. ■



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Do FIV Testing Before Adoption

Know if she's negative before adding her to your home

Questions still surround testing for feline immunodeficiency virus (FIV). FIV, or "feline AIDS," is caused by a retrovirus like feline leukemia virus (see p. 7). It's found in 1.5 to 5 percent of apparently healthy cats.

FIV is generally spread via cat bites, inflicted during a fight. Because FIV can suppress the immune system, infections of the skin, urinary tract, respiratory tract, gastrointestinal tract, and oral cavity are commonly seen in infected cats. These cats may cycle between good health and illness, often for long periods. Unfortunately, though, they usually ultimately succumb to FIV infection.

Testing Troubles

Many clinics, shelters, and rescue groups do a "quick screen" test for FIV, called an ELISA (enzyme linked immunosorbent assay). Done on site, this test screens for antibodies to FIV.

Most cats will show an antibody response to FIV within 60 days of infection by the virus. There can be false positives, though, so any positive feline should have a follow-up with a Western blot test. Kittens under 6 months of age who have an FIV-positive mother may test positive without being infected. Their tests may simply reflect the antibodies received from their dam while nursing. Those kittens should be retested after 6 months of age.

A complicating factor is FIV vaccination. Currently available tests can't consistently distinguish between FIV antibodies that develop as a result of infection by FIV and those that result from vaccination. So, the vaccine history of a cat is necessary to interpret these tests. Some owners skip FIV vaccination for their indoor cats. If you have a cat who goes outdoors, have the cat tested before doing an FIV vaccine. Only FIV negative cats should be vaccinated.

There's Hope

If your cat tests positive for FIV but is healthy, you can give her more quality time. While most cats diagnosed with FIV live a median time of five years after diagnosis, these can be high-quality years of life. Minimize stress so her immune system is not overworked, and keep her preventive health care at the highest level.



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Yes, that adorable soul you found lost in the woods needs a home, but you must remain a responsible cat owner.

While the possibility of infecting other susceptible cats exists for any FIV positive cat, cats that get along socially (i.e. they do not fight) may be able to live together without virus transmission, since bite wounds are most commonly required to spread the virus to another cat. Being proactive about an infected cat's health care via veterinary check-ups every six months is recommended for the best possible outcome. ■

A Word of Advice

If you're considering adding a cat or kitten to your family, have her screened for FIV. Remember, if a kitten screens negative, she's clear. If she screens positive, she should be retested every 60 days until 6 months of age to verify whether it is a "real" infection. During that time, the kitten should be isolated from any FIV negative cats.

Feline Parasite May Jump-Start New Businesses

Protozoa found to be a reliable indicator of entrepreneurship


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Medical News Today reported that a new study found that an infection with the cat-borne parasite *Toxoplasma gondii* makes people more risk-prone and likely to start a business. *T. gondii,* a protozoan parasite that infects 2 billion people a year, is found in domestic and wild cats. The Centers for Disease Control and Prevention say 11 percent of the U.S. population over the age of 6 may be infected.

"Using a saliva-based assay, we found that students who tested IgG positive for *T. gondii* exposure were more likely to major in business and more likely to have an emphasis in 'management and entrepreneurship' over other business-related emphases," state the researchers. The study included almost 1,500 students.

"Nations with higher infection also had a lower fraction of respondents citing 'fear of failure' in inhibiting new business ventures. While correlational, these results highlight the potential linkage between parasitic infection and complex human behaviors, including those relevant to business, entrepreneurship, and economic productivity," say the researchers. ■

Risky business: linking Toxoplasma gondii infection and entrepreneurship behaviours across individuals and countries Stefanie K. Johnson, Markus A. Fitza, Daniel A. Lerner, Dana M. Calhoun, Marissa A. Beldon, Elsa T. Chan, Pieter T. J. Johnson Published 25 July 2018.DOI: 10.1098/rspb.2018.0822

Appropriate Scratching

Make the wrong spots no fun


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Punishment doesn't stop cats from scratching things. "It's like yelling at a cat for doing something as natural as grooming," says Dr. Bruce Kornreich, CatWatch Editor-in-Chief and associate director of the Feline Health Center. Instead, be smarter than the cat. Give her an appropriate, comfortable, sturdy scratching surface, such as flat horizontal scratchers, and toys covered with sisal rope, fabric, or cardboard. Sprinkle some catnip on the surface to attract her attention. Once she's interested, it's time to place possible deterrents where you don't want scratching. Here are five tricks that can work:

1. *Furniture repellent sprays:* These scents work for most cats, but be sure to respray, as the scent isn't long lasting.
2. *Sticky double-sided tape:* Place the tape on furniture, but first test it in an inconspicuous spot to be sure it won't harm the furniture.
3. *Smooth shield/surface covers:* These deter scratching on furniture because the cat loses interest when he can't get a good pull. For example, the Clawguard shield.
4. *Safe booby traps:* Consider something that will fall over and spook the cat away. A tower of plastic cups works harmlessly.
5. *A compressed air can designed for cats:* When a cat approaches a restricted area, a motion detector releases a spray of compressed air in a hiss to shoo him away. For example, the Ssscat Automated Cat Deterrent. ■

CatWatch

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Potential Deadly Feline Calicivirus

Typically a self-limiting upper-respiratory infection, mutations can lead to a lethal form

Feline calicivirus (FCV) is found in up to 40 percent of cats. It commonly causes a self-limiting upper-respiratory infection, but a rare, virulent strain can cause fatal inflammation of the liver, intestines, pancreas, and cells that line the blood vessels.

At the 2018 Fred Scott Feline symposium held at the New York State College of Veterinary Medicine at Cornell University, Dr. Regina Hofmann-Lehmann, world-renowned specialist in feline infectious diseases from the University of Zurich, Switzerland, spoke about feline calicivirus. In general, calicivirus infection may occur in cats with other infections, including herpes and mycoplasma.



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Calicivirus is spread by saliva and nasal droplets. Even you can spread FCV if you were near an infected cat.

Symptoms

FCV is highly contagious and almost always causes signs of illness. Fever and ocular/nasal discharges are common, along with sneezing. A classic sign of calicivirus is ulcers in the mouth, including on the gums, hard palate, and tongue. Cats with these ulcers often drool, act as if their mouth is painful, and may not want to eat or drink.

Many cats with calicivirus infections will have swollen, painful conjunctiva around the eye, often with clear discharge. Discharges from the eyes and nose may turn purulent, especially if there is secondary bacterial infection.

Certain strains of the virus may show a tendency to progress to pneumonia or to cause lameness from painful joint arthritis, especially in kittens.

"Cats with chronic stomatitis and shifting leg lameness may have calici infections. Maine Coon cats seem to have a high risk for FCV infection, which may be associated with early periodontal disease in that breed," says Dr. Hoffmann-Lehmann.

Cats who appear healthy cats and cats who have recovered from infection may be carriers. These cats may intermittently shed the virus for the rest of their lives while not showing illness themselves. Some cats will have chronic low-grade conjunctivitis as a residual effect.

The virus is spread from cat to cat by saliva, nasal droplets, and in rare cases in the urine and/or feces. Since the virus can survive well in the environment, shared dishes, toys, litter boxes, and bedding can be sources of infection. Serious disinfection efforts are needed to decrease the amount of virus in the environment. Under ideal conditions, FCV may persist for as long as a month in the environment.

Diagnosis and Treatment

Diagnosis is best done by recognition of classic clinical signs and by collecting samples to identify the virus using PCR (polymerase chain reaction) techniques. There can be false negatives, so a follow-up is recommended if the clinical signs match the disease even when the initial test is negative.

Treatment of cats with calicivirus infections is mostly supportive care. Antibiotics may be prescribed if there are signs of secondary bacterial infections. Cats with severe ocular lesions will need gentle cleaning of the eyes and ointments multiple times a day. Nasal discharge must be cleaned multiple times per day. Humidification of the air may help.

With oral ulcers, an infected cat's appetite may decrease. Offering foods that are easy to eat (think mush and softened foods) and that have strong odors may stimulate a cat's appetite in these cases. Adding the juice from a can of tuna to her food, for example, may help. Some cats may require hospitalization for fluid therapy and nursing care.

Systemic FCV Infections

Virulent systemic FCV infections may result in severe whole-body inflammatory reactions. Affected felines may suffer skin edema and ulcers in various body parts, especially the head and paws. Fevers are usually noted. Internal organs are commonly affected. Most cats with this version of the virus will die. There is a milder form of this illness called "paw and mouth disease" with a lower mortality rate.

The European Advisory Board on Cat Disease (abcdcatsvets.org) suggests reducing the size of cat populations in a group to minimize the chance of infection. This means keeping three or fewer cats in a shared a common area. Strict disinfection protocols must be always be followed.■

Did You Know?

FCV is a challenging virus. It's an RNA-type virus that doesn't have an "envelope." That means it's resistant in the environment and requires specific disinfectants to neutralize it. RNA viruses are also prone to frequent mutations.

Vaccine Programs



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The feline calicivirus vaccine is a core vaccine, recommended for all cats. "Every cat should be vaccinated against FCV. The vaccine usually protects against FCV-induced disease, but not against infection," says Dr. Regina Hofmann-Lehmann. This means that vaccinated cats do not usually show any illness, but they may still harbor and shed the virus. Even though the virus can and does mutate, so far, the vaccine strains seem to provide reasonable protection. Standard vaccination recommendations may not apply in all situations and for all individual cats (cats in a high-risk situations may need yearly boosters).

First-Aid for Shock

Shock is an emergency: Rapid action is required to protect the brain and organs from irreversible damage

At the most basic level, "shock" is when something causes the body to shut down and fail to function properly. This is largely due to malfunctions in or damage to the circulatory system leading to low blood pressure, which makes it difficult to get sufficient oxygen to the tissues.

Shock has many potential causes, including trauma, severe burns, infection, allergic reaction, severe heart disease, or another serious systemic illness.

Types of Shock

While shock is always a veterinary emergency, understanding the different classifications of shock can help you understand what is happening in your cat's body if he goes into shock:

Anaphylactic shock is an immediate allergic reaction that happens within minutes of exposure to the triggering insect bite, injection, or food. Symptoms include difficulty breathing, pale gums, cold feet/legs, an elevated heart rate with weak pulse, vomiting, diarrhea, drooling, agitation, facial swelling, seizures, coma, and even death.

Hypovolemic shock is when large amounts of blood are lost, causing low blood pressure and poor oxygenation of the body's tissues. Hypovolemic shock is generally due to trauma, such as being hit by a car or attacked by another animal, but can also be caused by internal bleeding due to a health problem, such as cancer.

Septic shock is a dangerous drop in blood pressure and resulting organ failure in response to an infection in the bloodstream. Some bacteria produce toxins that cause the blood vessels to dilate, which lowers blood pressure. Cytokines, substances that the cat's immune system produces to fight the infection, can be involved in causing vasodilation.



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A rapid heartbeat is one of the signs of shock.

Signs include disorientation, elevated temperature, panting, and a rapid pulse. As the cat's condition deteriorates, difficulty breathing, a drop in body temperature, fluid retention, and swelling can all occur as various organs fail.

Bloodwork is usually necessary to diagnose septic shock. The cat may have an abnormal white blood cell count, fewer platelets than normal, low blood-oxygen levels, and/or high levels of waste products. The offending bacteria can often be identified with a culture, but your veterinarian will proceed with supportive care while awaiting results.

Treatment

Shock is treated by stabilizing the cat and addressing the underlying cause. Because there are many different things that could cause a cat to go into shock, the exact treatment protocol will vary from case to case. Your veterinarian or a technician will ask questions to try to figure out what happened to cause your cat to go into shock, often while other team members are starting to work on your cat to support her respiratory and circulatory systems.

Fluids are a mainstay of treatment for shock because they help to improve the cat's blood pressure. If the cat has low blood pressure due to blood loss from trauma, the fluids replace the volume of the missing blood, allowing the cat's red blood cells to still adequately circulate through the body and bring oxygen to the tissues. If the cat has low blood pressure

Alert: Signs of Shock

- Lethargy
- Pale gums
- Extremities cool to the touch
- Weak pulse, rapid heart rate
- Rapid, shallow breathing
- Low body temperature

Perform Feline CPR

If you believe your cat's heart has stopped beating and he is no longer conscious, start chest compressions immediately:

1. Open the mouth to be sure nothing is obstructing the airway.

2. Lay your cat on his side on a firm surface.

3. Place your hand over the cat's heart, which lies under the ribs where the elbow falls against the body, and start chest compressions, which should be strong enough to compress the depth of the chest by 30 to 50 percent, allowing the chest to recoil completely between compressions. Note: If the cat is small, one hand will be enough. Wrap your hand around the cat's chest, with your thumb over the heart on one side and your first two to three fingers over the heart on the other side. Wrap your hand around the cat's underside, not the back. For large cats, two hands may be preferred. Place one hand over the other interlocking the fingers. The heel of your bottom hand should be over the heart.

4. Compress 30 times in 15 seconds (2 compressions per second) and then hold the cat's mouth closed and breathe two short breaths into the cat's snout (nose and mouth). Your mouth should make a seal over the cat's snout. Blow strong, quick breaths into the nostrils to achieve a normal chest rise. Then immediately resume compressions.

5. Repeat this cycle of 30 compressions followed by two quick breaths until the cat is resuscitated or until you get to the veterinary hospital.

En Route

Wrap your cat in a towel or blanket to keep him warm. Hold his head lower than his body to encourage blood flow to the brain.

due to dilated blood vessels making the cat's circulatory system too "big" for a normal volume of blood, the fluids fill up that extra space. Imagine that a quart-size bag of water is a healthy cat with good blood pressure (the bag is full, so the outside is smooth and taught like a water balloon). A cat whose blood vessels have dilated due to shock is more like a gallon size bag still with only a quart of water – the water sloshes around inside the bag, and the bag can fold in on itself. Fluids restore blood pressure until time and other medications and treatments can restore the cat's circulatory system back to normal.

Fluids can make a difference. Some types of fluids draw water out of your cat's cells and into the blood vessels, and different types are more or less likely to leave the vessels and enter the cells and interstitial spaces of the body. Which type of fluids is used depends on your cat's condition, other treatment measures being taken, and what your veterinarian has available to work with. Blood transfusions are also an option.

A cat in shock will often receive oxygen, either via a mask hooked up to an anesthesia machine or through an endotracheal tube placed down his throat. Providing pure oxygen for the cat to breathe ensures that the cat's red blood cells will be saturated with oxygen to bring to the tissues of the body.

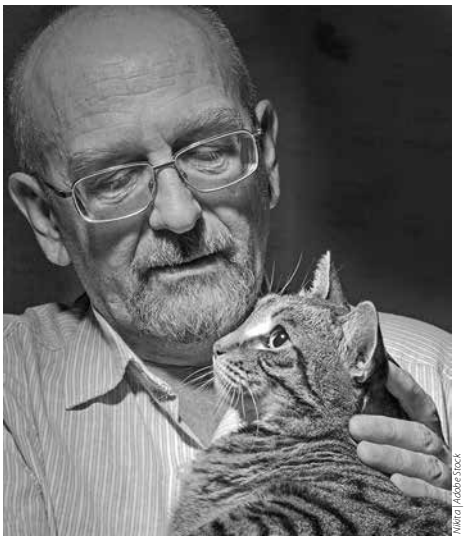
Medications that may be used when treating shock include epinephrine, atropine, antihistamines, anti-inflammatory drugs, corticosteroids, and antibiotics. Epinephrine causes the peripheral blood vessels to constrict, which increases blood pressure and helps to maintain adequate circulation to all parts of the body. Atropine increases the heart rate and constricts blood vessels, both of which help to increase blood pressure. Antihistamines, anti-inflammatory drugs, and corticosteroids disrupt the inflammatory response. Antibiotics are appropriate for patients suffering from an infection.

Of course, prevention is the best medicine. Keep your cat safe from trauma by keeping him indoors and placing him in a carrier for travel. Vaccinations and regular veterinary exams will help keep him healthy and identify any developing health problems early. Finally, if you know your cat or one of his relatives has had a severe allergic reaction to something in the past, avoid that trigger going forward. ■

Nutritional Power for Senior Cats

The right diet can help your aging cat fight chronic disease and other physical changes

The challenge with senior cats is that their digestive systems often don't function as efficiently as when they were young. On top of that, just like older humans, geriatric cats may not digest or absorb nutrients as well as when they were in their prime. Keeping your older cat well-nourished just takes some attention to ensure that she is eating and that the food you've chosen addresses the nutritional issues an aging cat faces.



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Our older cats may need just a little added nutritional support.

Unintended Weight Loss

If your cat is losing weight or eating less than she used to, the first step is a visit to your veterinarian for a full examination and some bloodwork. Once you have developed a management plan with your veterinarian, there are a couple of things you can try to improve your cat's appetite.

Smelly foods can entice sick or elderly cats to eat. Scent plays a huge role in feline appetite, so if she is having trouble with her sense of smell, she may not want to eat. Dribble some tuna juice over her kibble or add canned food that smells meaty. Warm up canned food just a bit in the microwave to bring out its scent, but check that the food isn't too hot before serving.

If that doesn't work, discuss the use of mirtazapine or cyproheptadine with your veterinarian. These medicines can stimulate your cat's appetite. Mirtazapine has the added benefit of decreasing nausea. Your veterinarian will likely adjust the dose over time so that your cat is getting the smallest dose that proves effective for her.

If her weight loss is primarily due to muscle loss, she may need to switch to a diet with more or higher-quality protein. This will depend upon any underlying conditions that your cat has, but your veterinarian can help you determine if it's a loss of fat or muscle.

In some cases, it may be necessary for your veterinarian to place a feeding tube. Some types of feeding tubes are only for short-term use, while others can be left in place for longer periods of time. These tubes are useful for cats who can't or won't eat on their own or who become overly stressed when restrained for feeding or medication.

Heads Up!

Signs that something isn't quite right with your cat include:

- ➔ Decreased/increased appetite
- ➔ Increased urination/drinking
- ➔ Vomiting/diarrhea
- ➔ Weight loss
- ➔ Poor coat quality
- ➔ Lethargy
- ➔ Painful or decreased urination
- ➔ Decreased stool production

Nutritional Supplements

Your cat gets vitamin B from her food and can't store any extra. If your cat is having digestive problems or not eating as much, she could become vitamin B deficient. Your veterinarian can measure the B12 levels in your cat's blood. If your cat has a vitamin B deficiency, she may need oral supplementation or to receive injections. Depending on your cat's condition, this could be a temporary fix

or may be necessary long-term.

Antioxidants are compounds that protect against cellular damage due to inflammation. Some common examples are vitamin C, vitamin E, beta-carotene, and the enzyme catalase. According to the American Association of Feline Practitioners, "Diets enriched with antioxidants and other supportive compounds (e.g., vitamin E, beta carotene, and essential omega-3 and 6 fatty acids) are believed to reduce oxidative damage and amyloid production and improve cognitive function." While the bulk of this research has been done in humans and dogs, at least one study showed improved cognition in cats who were fed a diet supplemented with antioxidants, arginine, B vitamins, and fish oil. These nutrients can be purchased as supplements you can add to her diet.

Your cat's cognitive function—her brainpower—might be helped with carnitine and omega-3 and omega-6 fatty acids, such as fish oil. Carnitine is a compound that plays a role in cellular energy production, and fatty acids promote cell membrane health. Although most of the research has been done with humans and dogs, the results suggest that these supplements may be beneficial for cats as well.

Before starting any supplement, consult with your veterinarian to determine the optimal dosage and whether the supplement is appropriate for your cat. Supplements are a buyer-beware market. There is little regulation, and a product may or may not contain what the label says it does. One thing you can do is check for a National Animal Supplement Council (NASC) Quality Seal on the bottle. NASC member companies submit to audits to ensure that the ingredients they use are quality ingredients and found in the amounts listed on the labels (see nasc.cc).



A lethargic cat at any age is a signal something's wrong.

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Water Intake

Maintaining proper hydration can help to keep your cat healthy, and some diseases can cause your cat to become dehydrated more easily. One concern regarding dehydration is that it can cause your cat to become constipated. As well as being uncomfortable, constipation can wreak havoc on your cat's digestive system. Severe constipation may require surgical intervention. For male cats, especially, dehydration can increase the risk of urinary obstruction, which is a life-threatening emergency.

You can entice your cat to drink more by making access to water easier (away from other pets who may compete for it and in an easily accessible place). Consider plenty of water bowls in places that your cat can easily get to in different spots in the house (and keep it fresh by dumping and replacing the water daily). You can also consider a kitty drinking fountain or possibly a dripping faucet if your cat isn't interested in regular bowls and leaving a faucet dripping is feasible.

If you notice she's not a "heavy drinker," consider adding moisture to her food. Canned food has a higher moisture content than dry food, so switch diets or supplement her regular kibble with canned food. If your cat is determined to only eat her dry food, add water to her kibble. Tuna juice or chicken broth ice cubes can also be fun treats, but be sure to use low-sodium options, especially if your cat has a history of kidney/ heart disease or hypertension

Disease-Specific Diets

Like human seniors, aging cats often have special health needs. For example, diabetic cats are often put on a diet that is high in protein and low in carbohydrates.

Struvite urine stones and crystals can be resolved by acidifying your cat's diet, but excessive acidification brings its own issues, as do low-sodium diets. There are non-acidified prescription diets available to help prevent both struvite and calcium oxalate crystals. They are prescription, so you will need to go through your veterinarian to obtain these foods.

Not all general-practice veterinarians are well versed in nutrition, which is a complex science. If your cat has multiple health issues, it may be worth the expense to consult with a veterinary nutritionist to determine the ideal diet for her situation. When multiple illnesses are adding up, an expert's assistance can help you get to the best solution without having to put yourself and your cat through several rounds of trial and error. Many diseases can cause cats to lose weight, making extra calories necessary to keep the cat in decent condition while undergoing treatments or supportive care. Consider a consultation with a veterinarian who is board-certified in nutrition. Check the American Board of Veterinary Nutrition at acvn.org.

Little Adjustments

"Feeding small meals frequently increases digestive availability," advises the American Association of Feline Practitioners' Senior Care Guidelines. "The ideal number of meals is not known, but feeding multiple (e.g., three or four) small meals per day is a reasonable goal." To accomplish this, split your cat's normal amount of daily food into smaller portions that she then gets throughout the day. This is easiest to do in a household where someone is home most of the day, but working cat owners can still break their cat's daily ration into at least three meals by giving one in the morning, one right after getting home from work, and the final meal shortly before bedtime. Adjustments can be made depending on your lifestyle and schedule. Keeping track of overall food eaten is particularly important for overweight cats. Remember that when your cat is receiving more meals per day, each of those meals needs to be smaller. ■

Screening Tests and Bloodwork

Our new series will to help you understand the value of common tests that your veterinarian may run—First up: Feline Leukemia (FeLV)

Advances in veterinary medicine have enabled our feline friends to live longer, healthier lives, and these are not just improvements in treatments. Technology has pushed screening and prevention to the forefront, so disease can be headed off before it gets a stronghold. Some screening tests are recommended before you bring your cat or kitten home. Like any new thing, you may find yourself wondering, "Are they all necessary?"

Worthwhile Choice: FeLV

Whether you are adopting your first kitten or adding a fourth cat to your household, some screening tests are worthwhile, including the test for FeLV. While this devastating disease is becoming less common due to screenings and vaccinations, it's far from eradicated and you really ought to know if your potential new family member is positive for this virus, especially if you have other cats or kittens at home.

Dr. Fred Scott DVM PhD, founder and former Director of the Cornell Feline Health Center, says a positive blood test for FeLV will identify the presence of FeLV antigens (small proteins that are part of the virus). There are two types of tests commonly used for FeLV diagnosis. One is a quick screening test called an ELISA (enzyme-linked immunosorbent assay), which can usually be performed at your veterinary clinic and is routinely carried out as the initial FeLV screening test. Most shelters and rescue organizations perform this test before putting cats up for adoption.

If a healthy cat tests positive on the ELISA, then an IFA (immunoflourescent assay) is generally run. This is a confirmatory test that, because of the technology required, is usually done at a commercial laboratory.

At the 2018 Fred Scott Feline Symposium at Cornell, FeLV was a topic of discussion by Dr. Regina Hofmann-Lehmann, a recognized expert on feline infectious diseases from the University of Zurich, Switzerland. She notes that not all FeLV isolates are identical, and they may cause different clinical problems. "Exogenous FeLV isolates are grouped into four major subgroups, FeLV-A, -B, -C and -T. The dominant FeLV-A subgroup is horizontally transmitted and is found in all FeLV-infected cats. This is the most infectious form of the virus, but low in pathogenicity. The other subgroups arise within the infected cat by mutation. Some FeLV-B infected cats develop lymphoid malignancies (cancers), while FeLV-C infection is associated with the development of aplastic anemia." FeLV-T tends to be associated with T cells and decreased immunity. For your individual cat, simply knowing if she is FeLV positive or negative is what is important.



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We all want what's best for our cats, which means understanding the testing suggested by our veterinarians.

What the Results Say

Cats can generally show three different results from FeLV testing. Hopefully, they are negative (no sign of FeLV antigen). They may also have what is classified as a "progressive infection," which means that the virus is present, that the cat may be shedding the virus, and that he can infect other cats in addition to being at high risk of developing FeLV associated illnesses. Third, the cat may have a "regressive infection" where the virus is incorporated into her system, but she does not shed virus unless she is stressed or ill.

Any cat showing signs of illness that might possibly be connected to FeLV infection should be isolated from other cats and tested (or retested). Ideally, your cat should be tested before being vaccinated as well. An FeLV positive cat may occasionally be retested after some interval, as the cat may be able to eliminate the virus. In the meantime, the cat should be isolated from other cats.

A cat who has a progressive infection and sheds the virus is dangerous to other cats, particularly cats that are not vaccinated against FeLV. FeLV can be shed in saliva, nasal secretions, urine, feces, and milk of infected cats. Susceptible cats may become infected via casual contact with FeLV positive cats or by sharing dishes and litterboxes, but the virus is not tough and does not survive for long in the environment. An infected female cat can pass the virus to her kittens both in utero or through nursing.

The Decision

Cats who will be going outside should be tested and vaccinated. In addition, cats who will be exposed to other cats in rescues, shelters, and multi-cat households will benefit from testing and vaccination. Remember that cats who test positive should be isolated from other cats until they are followed up with the appropriate secondary tests and their true status is determined.

If it is ultimately determined that they are truly infected, they should be isolated, placed with other FeLV positive cats, or with cats that are appropriately vaccinated against FeLV (the latter is not ideal, because no vaccine is 100 percent effective). Kittens are most susceptible to infections of FeLV, as their immature immune systems may not be up to eliminating the virus.

If your cat has tested positive for FeLV, says Dr. Scott, "You don't have to consider it a death sentence. First of all, you'd do well to have the animal retested after about three months, since the original test may have yielded a false positive. Secondly, some FeLV-infected cats develop an effective immune response, which controls the viral infection and results in a transient viremia instead of a persistent viremia. In these cats, subsequent FeLV tests may show that the cat no longer has virus in its blood and is not shedding virus into the environment. Finally, while there is no cure for FeLV infection, supportive care and diligent monitoring of any health problems that may arise can often result in several years of relatively good health." ■

Why Not Give Itching Cat Steroids?

Our reader is frustrated that her veterinarian opted not to keep her feline friend on steroid shots

Q We recently adopted a 6-year-old male domestic shorthaired cat that was receiving steroid shots every six months when we got him, but our veterinarian opted not to give him this shot when we first brought him in, and now he is scratching all the time and has licked all of the hair off of his belly. Can you give us some advice about how we can help this boy?

A Thanks for getting in touch, and I understand that this must be distressing for both your kitty and for you. Many things can cause a cat to scratch, so perhaps a brief review of the most common causes would help. It is understandable that your veterinarian was hesitant to give the steroid injection to your kitty, as while steroids can be effective at stopping scratching in cats, they may predispose to and/or worsen other health problems.

The first thing to make sure of is that your cat does not have ectoparasites, and far and away the biggest problem in this regard is fleas. Cats can harbor fleas without their owners knowing it, and they can be allergic to flea saliva. If this is the case, when a cat is bitten by fleas, this can cause itchiness and scratching. Passing a flea comb through your kitty's fur is a good way to see if any fleas or small white and/or black particles are found. The latter are most commonly flea eggs and feces, respectively, and these are tell-tale signs of flea infestation, even if you don't find any actual fleas. I imagine that your veterinarian looked for fleas, but it couldn't hurt to keep an eye out yourself. Of course, if fleas are found, please discuss how to eliminate/prevent infestation with your veterinarian.

Another cause of scratching in cats is food allergy. Cats may become allergic to components of their food, most commonly the protein source, and this may cause itchiness. The best way to rule this out is to feed only a food that has a protein source that the cat has not eaten before for four to six weeks and see if this eliminates the itchiness. It's important to note that if such a food trial is attempted, the cat must receive ONLY that food, so no treats, food of other pets' food, or human food, as it's important to strictly control the protein source in the food. If a cat stops scratching on this novel-protein diet, that suggests that he was allergic to the protein source in the original food, and this protein source should be permanently eliminated from the cat's diet. In rare cases, allergies to other, non-protein components of the food may be identified in a similar trial-based manner.

Finally, cats may become allergic to inhaled allergens, in a manner similar to people who suffer from hay fever or seasonal allergies. Pollen, mold, and dust/house mites are potential sources of inhalant allergies in cats. Limiting exposure to these allergens by using air purification, frequent vacuuming with a HEPA-filter vacuum, steam cleaning mattresses/carpets, and/or removing carpets can be helpful with inhalant allergies, depending upon their cause. Either skin testing or bloodwork can be used to diagnose inhalant allergies, and treatment may consist of small, increasing doses of the allergen under the skin over time (immunotherapy, or allergy shots) or medications to decrease itchiness (steroids are often effective, but again, they can have side effects). Consultation with your veterinarian or veterinary dermatologist is recommended if inhalant allergies are suspected.

I hope that this is helpful, and please discuss these possibilities with your veterinarian. (By the way, we will be taking a more in-depth look at steroids next month.)

All my best,
Elizabeth



Elizabeth works with the Cornell Feline Health Center in providing the answer on this page (vet.cornell.edu/fhc/).

Coming Up . . .

- *Your Cat's Liver*
- *How to Induce Emergency Vomiting*
- *Nighttime Cat Meowing*
- *Why Steriods Are Used With Caution*

Have a Question For Elizabeth?

Send Ask Elizabeth questions and letters to the editor to:

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We welcome digital photos of your cat to consider for use with your question.

HAPPENING NOW…

Serial Cat Killer: *Newsweek, The New York Times* and other news outlets are reporting that someone is mutilating and killing cats across Washington state. As we go to press, 13 cats have been found "brutally killed and left on display" in public places. A reward of $36,000 has been offered for more information. The killer could face two years in prison for each cat killed. "There have been past cases where perpetrators were caught that turned out to be serial killers," says Ben Elkins, a major crimes detective with the Thurston County Sheriff's Office, in the Times. "Is that the case in this? We don't know, but we're not taking any chances." The killings are believed to take place between 11 p.m. and 6 a.m.

Landlords Must Check for Pets: A new law signed into legislation in New York state requires law-enforcement officials to check for pets who may have been abandoned by the renters and left behind when enforcing an eviction notice to renters. ■

