## **: Bilmar Kitten Kit



## Congratulations on your new pet! Enjoy the journey "\%

Page 2: Emergency Referral Information
Page 3: Signs of an Emergency
Page 5: Common household toxins
Page 8: Typical Vaccine Schedule
Page 9: What to expect after your Pet's vaccine
Page 10: Explanation of Vaccines
Page 11: Feline Immunodeficiency Virus (FIV)
Page 16: Feline Leukemia Virus
Page 19: Intestinal Parasites
Page 23: Altering your Pet (Spay and Neuter information)
Page 25: How to Trim Your Cat's Nails
Page 28: Litter Box Training
Page 32: Introducing a New Cat
Page 34: Indoor vs Outdoor Cats: What to Know Before Deciding
Page 36: Feline Enrichment
Page 39: Introducing Your Cat to a New Baby
Page 41: Traveling with Your Cat
Page 44: Misconceptions of Indoor Cats

## Bilmar Vet Services Hours and Referral Information

776 Main Street, Great Barrington, MA 01230
Phone: 413-528-1180 Fax: 413-528-1763 Email: hello@bilmarvet.com

Business hours:<br>Monday 8:30am-4:30pm<br>Tuesday 8:30am - 5:00pm<br>Wednesday 8:30am - 5:00pm<br>Thursday 8:30am-5:00pm<br>Friday 8:30am-4:30pm<br>Saturday 8:30 am - 12:00 pm

## After Hours Emergency Hospitals

| Vet ER and Specialty Hospital (VESH) 413-665-4911 www.veshdeerfield.com 141 Greenfield Rd, South Deerfield, MA 01373 <br> 24-hour emergency hospital | Pieper Veterinary 860-347-1122 https:// www.pieperveterinary.com/ 730 Randolph Rd, Middletown, CT 06457 <br> 24- hour emergency hospital |
| :---: | :---: |
| Newtown Veterinary Specialists <br> 203-270-8387 www.newtownvets.com <br> 52 Church Hill Rd, Newtown, CT 06470 <br> 24-hour emergency hospital | Tuft's University Foster Hospital for Small Animals 508-839-5395 www.tuftsvets.org 200 Westboro Rd Rt 30, North Grafton, MA 01536 24-hour emergency hospital |


| Upstate Veterinary Specialties | Capital District Veterinary Referral |
| :---: | :---: |
| 518-783-3198 http:// | Hospital |
| www.uvsonline.com | $518-785-1094$ https:// |
| 152 Sparrowbush Road, Latham, NY | capitaldistrict.ethosvet.com// |
| 12110 | 222 Troy-Schenectady Rd, Latham, |
| NY 12110 |  |
| 24-hour emergency hospital | 24-hour emergency hospital |

## 8 Signs Your Pet Needs to See the Emergency Vet

Here are eight signs that your pet needs to see an emergency vet. These include a variety of medical emergencies that would require immediate veterinary attention. It is important to note that if your pet seems to be having a serious problem, but their symptoms are not included in this list, you should still call your veterinarian. This is because your pet could still be having a medical emergency, and they will be able to direct you in the right direction when it comes to giving your pet proper care. Here are the eight signs that your pet needs to see an emergency vet.

## 1. Your Pet Has a Swollen Abdomen (and it Feels Hard to the Touch)

Having a pet with a distended stomach is a sign of bloat, or GDV, and this is a medical emergency that requires surgery as soon as possible. Bloat occurs when the stomach twists on itself and fills up with air, which eventually also cuts off a pet's blood supply. GDV is much more common in dogs than it is with cats, and large dogs such as Great Danes are the most at risk for developing this condition.

## 2. Your Pet Has Eaten Something Toxic

There are many different foods that can be toxic to both dogs and cats, and it can become a very serious problem depending on what they ingest. Things like cleaning products tend to be more dangerous than toxic foods, but both can be life threatening. It is important that you call your emergency vet before making the trip over there. This is because you may need to do some things with a vet's direction before going over there such as inducing vomiting.

## 3. There is Blood in Your Pet's Vomit, Urine, or Feces

Blood is never a good thing to see in your pet's vomit, urine, or feces. Sometimes this can be a sign of some more minor complications such as a UTI when blood is found in urine. However, it can also be a sign of a medical emergency in pets as well.

## 4. Your Pet is Vomiting Excessively

Excessive vomiting can not only be a sign of a medical emergency in our pets, but it can also cause a medical emergency in the form of severe dehydration as well. As a result if your pet's vomiting is worrisome, excessive, or seems to have been going on for a long time then you should seek emergency veterinary attention.

## 5. Your Pet is Showing Signs of Shock

Shock is a state in dogs and cats that requires immediate emergency vet attention. This is usually caused by extreme trauma, heat stroke, and even extreme cases of vomiting and diarrhea in small or young dogs and cats. Some signs of shock to look out for include:

- A fast heart rate
- Pale gums
- Signs of severe dehydration (loss of skin elasticity, sunken eyes, sticky gums)
- Signs of extremely low blood sugar (altered mentation, muscle twitching, weakness)
- A slow respiratory/breathing rate

Small dogs, puppies, and kittens are most at risk for developing shock. However, even large dogs can go into shock in extreme cases such as being hit by a car. It is crucial that you take your pet to the emergency vet immediately if you notice any signs of shock.

## 6. Your Pet is Showing Signs of Extreme Pain

Extreme pain is also a valid cause for taking your pet to the emergency vet. Although extreme pain could easily be caused by an injury, it can be a sign of other conditions as well. It is always a good idea to take your dog to the vet if you believe that they are in pain, especially if that pain seems to be severe.

## 7. Your Pet Has a Serious Injury

Pets sustaining serious injuries should always be taken to the emergency vet immediately. Things like broken bones and open wounds can cause extreme pain, and things like blood loss, shock, and extreme dehydration can quickly develop. This is especially true if the animal is young or particularly small.

## 8. Your Pet is Struggling to Breathe

Breathing problems can be a sign of a medical emergency in both dogs and cats, and you should take your pet to the emergency vet immediately if you notice that they are struggling to breathe. This includes abnormal breathing in dogs with a known medical condition that could affect their breathing such as brachycephalic airway syndrome in dogs.

## What are the most common household toxins for pets?

As a pet owner, you want to keep your furry friend safe and healthy, but your pet's curious nature sometimes can get him into trouble. Animals investigate the world with their mouths and they can ingest poisonous substances accidentally. The American Society for the Prevention of Cruelty to Animals (ASPCA) Animal Poison Control Center is open 24 hours a day, 365 days a year, to advise pet owners about potential pet toxicities. To help you take precautions and ensure your pet stays safe, the ASPCA has compiled a list of the most frequent offenders, many of which can be found in and around your home.

If you believe your pet may have ingested a toxin, or if you are unsure please call the ASPCA Pet poison helpline at (888) 426-4435. The Veterinarians on staff will advise both you and your regular or emergency veterinarian (via case reference number) on the best treatment options for your pet, and help to organize follow-up care. There is a fee associated with this service, but the ASPCA Pet poison helpline staff have the best and most complete inventory of potential toxins, their risks and effects on the body, treatment plan, and treatment schedule.

## Pets and over-the-counter medications

In 2018, the ASPCA received 213,773 calls, almost $20 \%$ of which were related to ingestion of over-the-counter medications, such as ibuprofen, naproxen, cold medications, and herbal supplements. Even a medication that does not require a prescription can be extremely dangerous to your pet. Nonsteroidal anti-inflammatories such as ibuprofen and naproxen can cause acute kidney failure and should never be given to pets. Do not try to treat your pet's medical problems without consulting with a veterinarian, and never give him a medication that is not approved for veterinary use.

## Human prescription medications and pets

ADHD medications, antidepressants, and heart medications were most commonly ingested by pets, although your pet can suffer significant side effects from any human medication he eats. Keep all medications, both prescription and over-the-counter, safely stored inside a medicine cabinet or cupboard or up high where your pet can't reach them and ask your visitors to do the same.

## What foods are toxic to pets?

Many foods that are safe for people can be deadly to pets. Keep the following toxic foods away from your beloved companion:

- Chocolate
- Xylitol (often found in sugar-free gum)
- Macadamia nuts
- Grapes and raisins
- Onions
- Garlic
- Alcohol
- Caffeinated drinks
- Raw yeast dough
- Raw or undercooked meat

Never leave food where your pet can reach it and keep pets out of the kitchen when children are eating to prevent them from gobbling up dropped food.

## What about prescription veterinary products?

Prescription animal medications often are flavored to increase palatability, so pets may mistake them for treats and eat more than prescribed. Inquisitive pets may even eat pills that aren't flavored, so keep all medications out of your pet's reach. Remember, animals can chew through plastic bottles, so child-proof may not mean pet-proof.

## What other household items are dangerous to my pet?

Products such as paint, glue, and cleaning chemicals often are left out on the assumption that pets won't eat these bad-tasting substances. But sometimes pets lap up liquids because they feel good or have an interesting texture. Household products can contain dangerous chemicals and some household glues expand in the stomach, causing a life-threatening blockage.

## Rodenticides

Products designed to kill rodents are particularly dangerous to pets, who may be tempted to eat the tasty bricks, granules, or pellets left out for mice and rats. Rodenticides kill rodents by causing internal bleeding, high calcium levels, brain swelling, or toxic gas production. Never put rat bait out where your pet can find it and keep your pet confined to your yard to prevent him from eating your neighbors' rodenticides.
Insecticides and pets
Ant baits, bug sprays, and foggers can be poisonous to your pet. Read labels to ensure proper use of these products and prevent pets from exposure during and after use. Store all insecticides on high shelves out of a pet's reach.

## Plants toxic to pets

Plants found in flower beds, vegetable gardens, and indoor planters and arrangements can be toxic to pets. Cats, who particularly like to munch on greenery, are sensitive to many plant types, but dogs also can be at risk. A complete list of toxic and nontoxic plants can be found on ASPCA's website, but the most common toxic plants include:

- Autumn crocus
- Azalea
- Cyclamen
- Daffodils
- Dieffenbachia
- Hyacinth
- Kalanchoe
- Lily of the valley
- Lilies
- Oleander
- Sago palm
- Tulips

If your pet eats leaves, flowers, or stems, immediately take him and a plant sample to your Veterinarian. Although toxicity signs may not be apparent, it is vital to remove poisonous material as soon as possible to prevent toxin absorption into the body.

## Garden products and pets

Many products used on lawns, gardens, and flower beds can cause toxicity in pets. Fertilizers made from bone or blood meal are tempting to pets and can cause pancreatitis, or can clump in the intestines or stomach, causing a blockage. Other fertilizers and herbicides applied to lawns also may contain toxic chemicals.


## $\mathrm{FV}(\mathrm{RCP})$ and Rabies are considered CORE vaccines

This is a typical schedule for vaccines. Your puppy may receive them at slightly different times depending on age, breeder recommendations, lifestyle etc.

6-8 weeks- first in the series of FVRCP vaccines
12 weeks- Purevax RCP/Rabies combo vaccine
Please note: The Rabies vaccine can be given after 12 weeks, but MUST be given before 6 months of age.

16 weeks- Final FVRCP +/- Rabies vaccine (rabies can be given any time AFTER 12 weeks, but MUST be given before 6 months of age)

If you have interest in your feline companion becoming an outdoor cat- we recommend vaccinating against feline leukemia. This requires a blood test that is done in-house to identify whether the kitten is negative for the disease before vaccine administration. The test is most accurate when done after 6 months of age, but can be done as early as six weeks of age and repeated later on.

26 weeks- FeLV/FIV combo test in-house, followed by the first FeLV vaccine
29 weeks- Final FeLV 2 year vaccine
FIV and Feline leukemia (FeLV) will be discussed later in this kitten kit.

In general, but especially for cats and small dogs we like to space vaccines out

Here's Why:
Each vaccine has the potential, no matter how remote, to cause a reaction. The more vaccines given together, the higher the likelihood.
If we've given several vaccines together, we will not know which one (or if it was the combination) caused the reaction.
We want your pet to be protected from disease as safely as possible.

## What to Expect After Your Pet's Vaccination

It's common for pets to experience mild side effects after receiving a vaccine, usually starting within hours of administration..

## Side Effects:

The following side effects aren't unusual. However, if they last for more than a day or two, or cause your pet significant discomfort, it's important for you to contact your veterinarian.

- Discomfort and local swelling at the vaccination site
- Mild fever
- Decreased appetite and activity
- Sneezing, mild coughing, "snotty nose" or other respiratory signs occurring 2-5 days after your pet receives an intranasal vaccine


## Seek Veterinary Care Immediately If these Signs Develop:

More serious, but less common side effects, such as allergic reactions, may occur within minutes to hours after vaccination. These reactions can be life-threatening and are medical emergencies.

- Persistent vomiting and diarrhea
- Itchy skin that may seem bumpy ("hives")
- Swelling of the muzzle and around the face, neck, or eyes
- Severe coughing or difficulty breathing
- Collapse

A small, firm swelling under the skin may develop at the site of a recent vaccination. It should start to disappear within a couple weeks. If it persists more than three weeks, or seems to be getting larger, you should contact your veterinarian.
Always inform your veterinarian if your pet has had prior reactions to any vaccine or medication.
$\qquad$ vaccine was given.

## Vaccine Sticker(s):

Location of Vaccination:

## What Do These Vaccines Protect My Cat From?

## FVRCP Vaccine

Panleukopenia (feline distemper): This highly contagious and potentially lethal virus causes fever, vomiting, diarrhea, loss of appetite, and in some cases, sudden death. Kittens are particularly susceptible.

Feline herpesvirus (viral Rhinotracheitis): This virus causes upper respiratory infection with fever, sneezing, eye and nasal discharge, conjunctivitis (inflammation of the inner eyelids and mucous membranes around the eyes), inflammation of the cornea (keratitis), and lethargy. Kittens have an increased risk of infection.

Calicivirus: This highly contagious and ubiquitous virus is one of the major causes of upper respiratory infection in cats. Affected cats may have sneezing, eye and nasal discharge, conjunctivitis, lethargy, loss of appetite, sores on the gums and soft tissues of the oral cavity, and lameness. In some cases, affected kittens may develop pneumonia. In rare cases, a much more virulent strain of this virus can cause inflammation of the liver, intestines, pancreas, and cells that line the blood vessels. This severe form of calicivirus can be deadly in up to half of affected cats.

## Rabies Vaccine

Rabies virus: This deadly viral infection most commonly spreads through bite wounds, but can also be transmitted to any mammal by exposure of an open wound to the saliva of an infected animal. Skunks, raccoons, coyotes, foxes, and bats are the most common wild carriers in North America. Humans are at risk of infection if bitten by an infected animal or if the saliva of an infected animal comes into contact with an open wound. Rabies is routinely fatal once symptoms develop.

## Feline Leukemia (FeLV) Vaccine

Feline Leukemia Virus (FeLV): The leading cause of virus-associated deaths in cats, FeLV spreads through the saliva, nasal secretions, feces, urine, and milk of infected cats. Casual contact, bite wounds, and nursing can all transmit the infection. Roughly $50 \%$ of cats diagnosed with FeLV succumb to the disease within two and a half years. Infected cats may suffer from anemia, immune suppression, and cancer. FeLV vaccination is considered a core vaccine for all cats less than one year of age and a non-core vaccine for cats one year of age and older that have no potential for exposure to FeLV-infected cats or cats of unknown FeLV status.

## Feline Immunodeficiency Virus (FIV)

Feline immunodeficiency virus (FIV) is one of the most common and consequential infectious diseases of cats around the world. In infected cats, FIV attacks the immune system, leaving the cat vulnerable to many other infections. Although cats infected with FIV may appear normal for years, they eventually suffer from immune deficiency, which allows normally harmless bacteria, viruses, protozoa, and fungi found in the everyday environment to potentially cause severe illnesses.

Though there is no cure for FIV, recent studies suggest that cats with FIV commonly live average life spans, as long as they are not also infected with feline leukemia virus.

## Risk and Transmission

The primary mode of transmission for FIV is through bite wounds from an infected cat. Casual, non-aggressive contact, such as sharing water bowls or mutual grooming, does not appear to be an efficient route of spreading the virus. As a result, cats in households with stable social structures where housemates do not fight are at little risk of acquiring FIV infections. Only on rare occasions, an infected mother cat may transmit the infection to her kittens. However, if the mother becomes infected with FIV during her pregnancy, the transmission risk to the kittens is increased. Sexual contact is not a significant means of spreading FIV among cats.

FIV-infected cats exist worldwide, but the prevalence of infection varies greatly. In North America, approximately $2.5-5 \%$ percent of healthy cats are infected with FIV. Rates are significantly higher ( 15 percent or more) in cats that are sick or at high risk of infection. Because FIV is transmitted through bite wounds, un-neutered male cats with outdoor access, especially those who are likely to fight with other cats, are at the greatest risk for FIV infection. There is currently no vaccine commercially available in North America to protect against FIV, so the best way to reduce risk is to limit contact with cats who may be infected with the disease by keeping cats indoors and testing all cats within the household.

## Clinical Signs

There are three phases of infection with FIV - the acute phase, the asymptomatic (or latent) phase, and the progressive phase.

The acute phase of infection generally occurs 1-3 months after infection. At this time, the virus is carried to lymph nodes, where it reproduces in white blood cells known as T-lymphocytes. The virus then spreads to other lymph nodes throughout the body, resulting in temporary lymph node enlargement that is often accompanied by fever, depression, and lack of appetite. This phase of infection may be very mild and is often missed by owners or attributed to other causes of fever.

Following the acute phase, cats will enter an asymptomatic phase, which may last for months to multiple years. During this time, the virus replicates very slowly within the cells of the immune system, and cats will not show any outward signs of illness. Infected cats may exhibit blood work abnormalities, such as low white blood cell levels or increased blood proteins. Some cats will remain in this stage and never progress to more severe disease.

As the virus continues to spread through the immune system, cats will enter a progressive immuno-compromised state during which secondary infections may occur. Most illness related to FIV is not from the virus itself, but from these secondary infections or problems with the immune system. Cats may develop chronic or recurrent infections of the skin, eyes, urinary tract, or upper respiratory tract. Inflammation of the gums and severe dental disease, known as gingivostomatitis, is common in cats infected with FIV, and they are significantly more likely to develop cancer and
immune-mediated blood disorders than healthy cats. Weight loss, seizures, behavioral changes and neurological disorders are all possible. The severity of these illnesses can vary greatly, but once cats become ill with multiple critical infections or cancers, survival time is usually no more than a few months.

## Diagnosis

It is important that the FIV status of all cats be determined when they are first acquired, if they become ill, and regularly if they have any risk of exposure.

When a cat is first infected with FIV, its immune system develops antibodies against the virus that persist in the blood for the rest of its life. To diagnose FIV, blood samples are examined for the presence of these antibodies. This can often be performed using a technique known as enzymelinked immunosorbent assay (ELISA) right in the veterinarian's office, though positive results may be confirmed using the western blot or immunofluorescence (IFA) assays at a reference laboratory.

Because these tests check for antibodies to the FIV virus rather than the virus itself, there are a few scenarios when a single test is not sufficient to determine if a cat is truly infected with FIV or not.

A negative antibody test indicates that the cat has not produced antibodies against the FIV virus and, in the vast majority of cases, indicates that the cat is not infected. There are two scenarios in which negative results may occur in infected cats. It takes the body between 2 and 6 months to develop enough antibodies against FIV to be detected, so if a cat had been infected very recently, it may test negative for FIV even though it is truly infected. If exposure is possible, it is recommended that cats are retested after at least 60 days to get a more accurate result. On very rare occasions, cats in the later stages of FIV infection may test negative on FIV antibody tests because their immune systems are so compromised that they no longer produce detectable levels of antibody.

Because few, if any, cats ever eliminate infection, the presence of antibodies indicates that a cat is infected with FIV. Because false positives are possible, it is recommended that positive results in healthy cats are confirmed using a second technique mentioned above. There are two scenarios where a positive antibody test may not represent true infection. Infected mother cats transfer FIV antibodies to nursing kittens, so kittens born to infected mothers may receive positive test results for several months after birth. However, few of these kittens actually are or will become infected. To clarify their infection status, kittens younger than six months of age that test positive for FIV should be retested at 60-day intervals until they are at least six months old. If their antibody test remains positive after six months old, they almost certainly have a true infection. FIV vaccines also cause a vaccinated cat to produce antibodies against the FIV virus that can be difficult to distinguish from those produced by a cat in response to natural infection with FIV. Cats who have been vaccinated will test positive for FIV antibodies, so it is essential to know the vaccination history if possible. There has been no commercially available FIV vaccine available in North America since 2016, so it is becoming less likely that a positive result on an antibody test is due to a previous vaccination. This vaccine is available in other countries, such as Australia, New Zealand, and Japan.

To circumvent some of these problems with testing, a polymerase chain reaction (PCR) test can be used to detect short segments of the virus' genetic material. This tests for the presence of viral DNA itself rather than detecting antibodies against the virus. Because this method can produce relatively high numbers of false-positive and false-negative results, it is not the preferred method for screening tests but can be useful as a confirmation test in some instances.

## Treatment and Management

Unfortunately, there is currently no definitive cure for FIV. However, it is important to realize that while it is impossible to predict the survival of a given cat infected with FIV, cats infected with FIV can live very normal, healthy lives for many years if managed appropriately. Once an FIV infected cat has experienced one or more severe illnesses as a result of infection, however, or if persistent fever and weight loss are present, the prognosis is generally less favorable.

For a healthy cat diagnosed with FIV, the most important management goals are to reduce their risk of acquiring secondary infections and prevent the spread of FIV to other cats. Both of these goals are best met by keeping cats indoors and isolated from other cats. Spaying and neutering will eliminate the risk of spreading FIV to kittens or through mating and will reduce the tendency of cats to roam and fight if they do get outside. They should be fed nutritionally complete and balanced diets, and uncooked food, such as raw meat and eggs, and unpasteurized dairy products should be avoided to minimize the risk of food-borne bacterial and parasitic infections.

Wellness visits for FIV-infected cats should be scheduled at least every six months. The veterinarian will perform a detailed physical examination of all body systems with special attention to the health of the gums, eyes, skin, and lymph nodes. Weight will be measured accurately and recorded, because weight loss is often the first sign of deterioration. A complete blood count, serum biochemical analysis, and a urine analysis should be performed annually.

Vigilance and close monitoring of the health and behavior of FIV-infected cats is even more important than it is for uninfected cats.

Because most illness in FIV-infected cats is the result of secondary infections, it is very important that cats be promptly evaluated and treated when any signs of illness occur. These cats may require longer or more intense treatments and courses of antibiotics than cats without FIV. For routine procedures such as dental therapy or surgery, antibiotics may be recommended to help prevent secondary infections from taking hold.

Treatment for the virus itself is limited and mostly use drugs developed for treatment of Human Immunodeficiency Virus. Zidovudine (AZT) treatment can help cats with severe dental inflammation (stomatitis) or neurologic disease, but has not been shown to prolong survival in FIV-infected cats and can have serious side effects. There is significant ongoing research investigating different combination antiviral therapies to treat FIV.

## Prevention

The only sure way to protect cats is to prevent their exposure to the virus. Cat bites are the major means by which infection is transmitted, so keeping cats indoors, away from potentially infected cats that might bite them, markedly reduces their likelihood of contracting FIV infection. To reduce the chance of indoor cats becoming infected, it is ideal to assure that only infection-free cats are brought into a household occupied by uninfected cats. In some cases, separation of infected from non-infected cats is possible in a household, and this is ideal if infected cats must be brought into occupied by non-infected cats.

Unfortunately, many FIV-infected cats are not diagnosed until after they have lived for years with other cats. In such cases, all the other cats in the household should be tested. Ideally, all infected cats should be separated from the non-infected ones to eliminate the potential for FIV transmission. It is important to realize, however, that since FIV is transmitted primarily by bite wounds, transmission from an infected cat to an uninfected cat is much less likely in households that have stable social structures (i.e., households in which cats do not fight).

FIV will not survive for more than a few hours in most environments. However, FIV-infected cats are frequently infected with other infectious agents that may pose some threat to a newcomer. For these reasons, to minimize transmission of FIV and other infectious diseases to a cat that is brought into an environment in which an FIV-positive cat has lived, prudence dictates a thorough cleaning and disinfection or replacement of food and water dishes, bedding, litter pans, and toys. A dilute solution of household bleach (four ounces of bleach in 1 gallon of water) makes an excellent disinfectant. Vacuuming carpets and mopping floors with an appropriate cleanser are also recommended. Any new cats or kittens should be properly vaccinated against other infectious agents before entering the household.

## Human health concerns

Although FIV is similar to human immunodeficiency virus (HIV) and causes a feline disease similar to acquired immune deficiency syndrome (AIDS) in humans, it is a highly species-specific virus that infects only felines. There is currently no evidence that FIV can infect or cause disease in humans.

## Feline Leukemia Virus

Feline leukemia virus (FeLV) is one of the most common infectious diseases in cats, affecting between 2 and $3 \%$ of all cats in the United States. Infection rates are significantly higher (up to $30 \%$ ) in cats that are ill or otherwise at high risk (see below). Fortunately, the prevalence of FeLV in cats has decreased significantly in the past 25 years since the development of an effective vaccine and accurate testing procedures.

Cats persistently infected with FeLV serve as sources of infection for other cats. The virus is shed in saliva, nasal secretions, urine, feces, and milk of infected cats. Cat-to-cat transfer of the virus may occur from a bite wound, during mutual grooming, and (rarely) through the shared use of litter boxes and feeding dishes. Transmission can also take place from an infected mother cat to her kittens, either before they are born or while they are nursing. FeLV does not survive long outside a cat's body - probably less than a few hours under normal household conditions.

Cats at greatest risk of FeLV infection are those that may be exposed to infected cats, either via prolonged close contact or through bite wounds. Such cats include cats living with infected cats or with cats of unknown infection status, cats allowed outdoors unsupervised where they may be bitten by an infected cat, and kittens born to infected mothers.

Kittens are much more susceptible to FeLV infection than are adult cats, and therefore are at the greatest risk of infection if exposed. However, even healthy adult cats can become infected if sufficiently exposed.

## Clinical Signs

FeLV adversely affects a cat's body in many ways. It is the most common cause of cancer in cats, may cause various blood disorders, and may lead to a state of immune deficiency that hinders a cat's ability to protect itself against other infections. Because of this, common bacteria, viruses, protozoa, and fungi that usually do not affect healthy cats can cause severe illness in FeLV-infected cats. These secondary infections are responsible for many of the diseases associated with FeLV.

During the early stages of infection, it is common for cats to exhibit no signs of disease at all. Over time, however, (weeks, months, or even years) an infected cat's health may progressively deteriorate or he/she may experience repeating cycles of illness and relative health. Signs can include:

- Loss of appetite
- Progressive weight loss
- Poor coat condition
- Enlarged lymph nodes
- Persistent fever
- Pale gums and other mucus membranes
- Inflammation of the gums (gingivitis) and mouth (stomatitis)
- Infections of the skin, urinary bladder, and upper respiratory tract
- Persistent diarrhea
- Seizures, behavior changes, and other neurological disorders
- A variety of eye conditions
- Abortion of kittens or other reproductive failures


## Diagnosis

Two types of blood tests are commonly used to diagnose FeLV, both of which detect a protein component of the virus called FeLV P27. One of these tests, called an enzyme-linked immunosorbent assay (ELISA), is usually performed first as a screening tool, and can be run in a veterinarian's office. ELISA-type tests detect the presence of free FeLV particles that are commonly found in the bloodstream during both the early and late stages of infection.

The indirect immunofluorescent antibody assay (IFA) test is usually sent out to a diagnostic laboratory after a positive ELISA test to confirm FeLV infection and determine whether the cat has reached the later stages of infection. IFA tests detect the presence of virus particles within white
blood cells, usually an indication of a more advanced infection. The majority of cats that test positive by IFA remain infected for life. In some cases, isolating the whole virus or detecting DNA of the virus using a test called a polymerase chain reaction (PCR) may be recommended to determine whether FeLV has infected the bone marrow. Always consult with your veterinarian to determine which tests are appropriate for your cat.

## Treatment and Prevention

Although there are some therapies that have been shown to decrease the amount of FeLV in the bloodstream of affected cats, these therapies may have significant side effects and may not be effective in all cases. Unfortunately, there is currently no definitive cure for FeLV. Veterinarians treating and managing FeLV-positive cats showing signs of disease usually treat specific problems (like prescribing antibiotics for bacterial infections, or performing blood transfusions for severe anemia).

The only sure way to protect cats from FeLV is to prevent their exposure to FeLV-infected cats. Keeping cats indoors, away from potentially infected cats is recommended. If outdoor access is allowed, provide supervision or place cats in a secure enclosure to prevent wandering and fighting. All cats should be tested for FeLV prior to introducing them into a home, and infection-free cats should be housed separately from infected cats. Food and water bowls and litter boxes should not be shared between FeLV-infected cats and non-infected cats. Unfortunately, many FeLV-infected cats are not diagnosed until after they have lived with other cats. In such cases, all other cats in the household should be tested for FeLV. Ideally, infected and non-infected cats should then be separated to eliminate the potential for FeLV transmission.

A relatively effective vaccine against FeLV is available, although it will not protect $100 \%$ of cats vaccinated, and it is not considered a core vaccine. Owners contemplating FeLV vaccination for their uninfected cats should consider the cats' risk of exposure to FeLV-infected cats and discuss the advantages and disadvantages of vaccination with a veterinarian. Since not all vaccinated cats will be protected by vaccination, preventing exposure remains important even for vaccinated pets. FeLV vaccines will not cause false positive FeLV results on ELISA, IFA, or any other available FeLV tests.

## Prognosis

Although a diagnosis of FeLV can be emotionally devastating, it is important to realize that cats with FeLV can live normal lives for prolonged periods of time. The median survival time for cats after FeLV is diagnosed is 2.5 years. Once a cat has been diagnosed with FeLV, careful monitoring of weight, appetite, activity level, elimination habits, appearance of the mouth and eyes, and behavior is an important part of managing this disease. Any signs of abnormality in any of these areas should prompt immediate consultation with a veterinarian.

## Intestinal Parasites in Dogs and Cats

Dogs and cats can fall victim to many different types of parasites. Because many of these parasites live in their intestines, veterinarians will take stool samples during your pet's annual wellness exam to check for signs of intestinal parasites. Intestinal parasites are not uncommon, especially in young animals, which is why wellness exams are so important for maintaining your pet's good health.

## Symptoms

With some parasites, you may be able to see worms in your pet's stool, bedding, or under their tail. Puppies and kittens are especially at risk for health complications from intestinal parasites and, in serious cases, these parasites can be fatal. Another risk is caused by some parasitic infections being "zoonotic," which means that they can be transmitted to humans. These parasites can cause serious health issues in adults and children, including scarring inflammation.

The most common signs and symptoms of intestinal parasites are:

- Diarrhea, with or without blood or mucus
- Scooting
- Vomiting
- Distended abdomen (belly)
- Weight loss
- Decreased activity
- Dull coat

Pets become infected with intestinal parasites in a number of ways, including:

- Drinking contaminated water
- Coming into contact with other infected animals
- Coming in contact with fecal material containing these parasite eggs or larvae
- Swallowing fleas that are carrying the infective stage of Tapeworms
- Nursing from an infected mother
- Predation or hunting which through ingestion transmits the parasite from a rodent or another hunted animal carrying the parasite


## Types of Intestinal Parasites

## Roundworm

Roundworms are one of the most common intestinal parasites found in dogs and cats. Unlike hookworms, they do not attach to the intestinal wall. Instead, they live in the intestines and consume partially digested food. Once your pet is infected, roundworms pass tiny eggs into his stool. A mother dog or cat who has had roundworms at any time in the past can transmit them to her puppies or kittens before birth. This is true even if the mother tests negative for roundworms because the larvae (immature worms) encyst in the mother's muscle tissue and are not detected by our tests for adult worms. Another major source of roundworm infection for puppies and kittens is the mother's milk. Roundworm larvae may be present in the mother's mammary glands and milk throughout the nursing period. Pets may also become infected by swallowing roundworm eggs, which contain infective larvae. The larvae hatch out in your pet's stomach and small intestine and migrate through the muscle, liver, and lungs. After several weeks, the larvae make their way back to the intestine to mature. When these worms begin to reproduce, new eggs will pass in your pet's stool and the life cycle of the parasite is completed.

Roundworm eggs passed in another animal's stool may be infectious to your pet. In fact, a large number of animal species have been found to harbor roundworms and represent potential sources of infection for dogs and cats, including cockroaches, earthworms, chickens, and rodents.

## Hookworm

Hookworms are tiny intestinal parasites named for the hook-like mouth parts they use to attach to the intestinal wall. Pets often become infected when they swallow hookworm larvae, or immature worms, through routine grooming or ingestion of soil or other contaminated substances in the environment. The larvae may also penetrate the skin and migrate to the intestine to mature and complete the life cycle. If a pregnant dog has hookworms, the pregnancy may reactivate larvae. These larvae will enter the female's circulation and pass to the puppies through the placental blood flow. Finally, puppies may become infected through the mother's milk. This is a common route of infection for young dogs. Once your pet is infected, the hookworm attaches to the lining of the intestinal wall and feeds on his blood. Its eggs are ejected into the digestive tract and pass into the environment through your pet's feces, potentially increasing exposure to other animals. In dogs, a large number of hookworms can cause anemia. This problem is most common in puppies, but it will occasionally occur in adult dogs.

## Tapeworm

Tapeworms are long, flat worms that attach themselves to your pet's intestines. A tapeworm body consists of multiple segments, each with its own reproductive organs, which are passed in your pet's feces. Tapeworm infections are usually diagnosed by finding these segments-which often resemble white grains of rice or seeds - in your pet's stool, on his rear, or where he lives and sleeps. In order to become infected with tapeworms, your pet must ingest a flea that contains tapeworm eggs. This process begins when fleas are accidentally ingested upon licking or chewing the skin. The flea is digested within your pet's intestine and the tapeworm hatches, anchoring itself to the intestinal lining. It is important to note that any exposure to fleas may result in a new infection that can occur in as little as two weeks.

## Whipworms

Whipworms are parasites that live in the cecum (where the small and large intestine meet) and colon, where they cause severe irritation to the lining of those organs that can result in watery, bloody diarrhea and weight loss. Whipworms can be one of the most harmful worms found in pets if not properly treated. Whipworms pass microscopic eggs in the stool. Pets become infected by ingesting these eggs in soil or other contaminated substances in the environment. Whipworm eggs are very resistant to drying and heat, allowing them to remain viable in your pet's environment for years. Once laid, the eggs mature to an infective stage and reinfect within 10 to 60 days. When the eggs are swallowed, they return to the lower intestinal tract to complete the life cycle.

## Coccidia

Coccidia is a single-celled organism that can infect cats and dogs through contact with fecal matter containing the parasite. A pet can become infected by eating contaminated soil, drinking contaminated water, or licking paws and fur that has come into contact with infected feces. After infection, coccidia travels to the intestines and destroys the intestinal lining, which prevents absorption of nutrients. This causes severe diarrhea and dehydration. In some cases, infection can even lead to death. Coccidia is very contagious to puppies and kittens, so frequently cleaning up feces and frequent changes of water to prevent contamination is especially important around young pets.

## Giardia

Giardia is another single-celled intestinal parasite that can infect dogs, cats, and humans. Infection is caused by ingesting giardia through contact with contaminated food, water, soil, or fur. Like coccidia, giardia travels to the intestines and damages the lining of the intestinal wall, reducing the absorption of nutrients. Unlike coccidia, infections often have no symptoms. If there is diarrhea, there is usually no blood in the stool. Diagnosing giardia can sometimes be difficult due to the lack of symptoms and multiple stool samples are needed to confirm the infection because of the specialized tests of giardia.

## Diagnosis and Treatment

Your veterinarian will take a stool sample to test for the presence of microscopic eggs laid by adult worms. The veterinarian will then mix the sample with a solution that makes the eggs more visible underneath the microscope. In some cases, a routine stool sample test may be insufficient to diagnose a parasite. For example, detecting the single-celled parasite giardia requires a special solution to be added to the sample. In another case, testing for tapeworm eggs can sometimes cause false negatives. And if the intestinal worms infecting a dog or cat are not mature enough to be producing eggs, the fecal sample test will give negative results-which is why multiple fecal tests over a period of time are sometimes needed to successfully diagnose infection by an intestinal parasite.

After a diagnosis has been made, intestinal worms can be treated by using a dewormer solution. Other types of parasites require different types of medications to treat. There are some over-thecounter treatments for intestinal worms, but these don't work very well. Veterinarians have the most powerful and effective dewormers available for treating your pet and have guidelines that they follow to try to identify and protect our pets and their people. The recommendation is to deworm puppies and kittens automatically, deworm animals intended for breeding programs, and checking a sample of feces (again, a stool sample) at least twice yearly.

## Prevention

Preventing infection by intestinal parasites is highly dependent on good sanitation practices.

- Clean up your pet's droppings as quickly as possible to prevent the spread of infection.
- Make sure your pet has a source of fresh, clean water, because these parasites can often be found in contaminated water.
- Prevent your pet from eating soil or grass, which can contain parasitic eggs.
- Remember that droppings from other dogs/cats might be infested-be sure that your pet doesn't interact with these while out on walks.
- Use a monthly heartworm preventative medicine for your pet.
- Use a monthly flea prevention treatment to prevent parasite transmission to your pets from infected fleas.
- Don't allow yourself or your family to become infected-wash your hands after playing with your pet and make sure that outdoor play areas for your children, like sandboxes, do not contain any animal droppings.
- 

The good news is that intestinal parasites are easy to treat and even easier to prevent. In fact, if you give your dog heartworm prevention medication, you're most likely protecting your pet from the most common intestinal parasites. Several heartworm medications can treat roundworms and hookworms, and some products can even treat whipworms, tapeworms and one or more stages of fleas. You'll want to talk with your veterinarian to determine which parasite control medication is right for your pets.

## Spay and Neutering your pet

- Ovariohysterectomy, or the typical "spay": the ovaries, fallopian tubes and uterus are removed from a female dog or cat. This makes her unable to reproduce and eliminates her heat cycle and breeding instinct-related behavior.
- Orchiectomy, or the typical "neuter": the testes are removed from a male dog or cat. This makes him unable to reproduce and reduces or eliminates male breeding behaviors.


## Why spay or neuter?

Every year, millions of unwanted dogs and cats, including puppies and kittens, are euthanized. The good news is that responsible pet owners can make a difference. By having your dog or cat sterilized, you will do your part to prevent the birth of unwanted puppies and kittens. Spaying and neutering prevent unwanted litters, help protect against some serious health problems, and may reduce many of the behavioral problems associated with the mating instinct.
Removing a female dog or cat's ovaries eliminates heat cycles and generally reduces the unwanted behaviors that may lead to owner frustration. Removing the testes from male dogs and cats reduces the breeding instinct, making them less inclined to roam and more content to stay at home.

Spaying of female dogs and cats can help protect them from some serious health problems later in life such as uterine infections and breast cancer. Neutering your male pet can also lessen its risk of developing benign prostatic hyperplasia (enlarged prostate gland) and testicular cancer.

The procedure has no effect on a pet's intelligence or ability to learn, play, work or hunt. Some pets tend to be better behaved following surgical removal of their ovaries or testes, making them more desirable companions.

What are the risks of spaying and neutering?

Although reproductive hormones cause mating behaviors that may be undesirable for many pet owners, these hormones also affect your pet's overall health and can be beneficial. Removing your pet's ovaries or testes removes these hormones and can result in increased risk of health problems such as urinary incontinence and some types of cancer. Intact animals retain more muscle mass, and so their mobility may be superior as aged animals versus altered animals. Talk to your
veterinarian about the benefits and risks of the sterilization procedure so you can make an informed decision.

While both spaying and neutering are major surgical procedures, they are also the most common surgeries performed by veterinarians on cats and dogs. Like any surgical procedure, sterilization is associated with some anesthetic and surgical risk, but the overall incidence of complications is very low.

Before the procedure, your pet is given a thorough physical examination to ensure that he/she is in good health. General anesthesia is administered to perform the surgery and medications are given to minimize pain. You will be asked to keep your pet calm and quiet for a few days after surgery as the incision begins to heal.

When should I spay or neuter my pet?

Timing of the procedure is something to discuss during a veterinary visit, however there is some compelling data which has led us at Bilmar to generally recommend waiting until an animal is 'mature' before altering them. The age of maturation is different between dogs and cats, and with larger versus smaller dogs.


# How to Trim a Cat's Nails 

By Catherine Barnette, DVM
The answer to this question depends on the individual cat and its lifestyle. Cats that spend time outdoors often wear their nails down by climbing trees and other activities. Additionally, outdoor cats may benefit from having long nails, because they use these nails to climb trees and otherwise escape from possible predators.

Indoor cats, however, do not have a need for long nails and often are less active. While some cats are content to keep their nails worn down by scratching on a scratching post, other cats may want to sharpen their nails on your furniture, carpet, or other items. Trimming your indoor cat's nails regularly (every two to four weeks) can help minimize damage to your home. Older cats may also need help with nail trims, because they tend to be less active and may be less inclined to use a scratching post. In these cats, trimming nails not only protects your furniture and home, it also helps prevent your cat's nails from becoming overgrown. In severe cases, a cat's nails can become so long that they actually curve around and grow into the paw pads, causing an infection. Regular nail trims can help prevent this from occurring.

What type of nail clippers should I use for my cat?
Pet nail clippers come in several varieties. One common type of nail clippers is the guillotine style, with a hole through which you put the nail and a blade that slides up when you squeeze the handles closed. The other style of nail clippers is called a scissors style; two blades come together, like a pair of scissors. Either of these can be safely used with cats. In fact, you can even use human nail clippers on cats. (Although, if you take this approach, it is best to have separate clippers for cat and human use)

You may need to experiment with several clipper styles to find the one that works best for you. Many people prefer small, scissors-style clippers that are designed specifically for cats.

## How should I restrain my cat for their nail trim?

When restraining cats, you will likely discover that "less is more." Your cat may happily lay on your lap or a cat bed for her nail trim, especially if you have an assistant who can pet her while you are trimming the nails. This is especially likely if you introduced nail trimming from an early age, in a positive manner.If your cat is less receptive to having her feet handled or her nails trimmed, you may need to have an assistant hold her for you. Place your cat on an elevated surface, such as on a counter or on top of your washing machine. It may take a bit of trial and error, but most cats can be held with some gentle snuggling pressure over the shoulders. Some cats may feel more comfortable if they are wrapped in a fluffy blanket for this step. If your cat resists restraint, stop
trimming and contact your veterinarian for aid in trimming your cat's nails or an in-person demonstration of safe restraint techniques.

## How do I safely trim my cat's nails?

First, take your cat's paw in your non-dominant hand and press the middle paw pad between your thumb and forefinger. This will extend your cat's nails, so you can see what you are doing.

Next, place the clipper on the nail at the point where you wish to cut. If your cat has white nails, you should be able to see the quick; your goal is not to cut too closely to the quick. If your cat has dark nails and you cannot see the quick, aim to cut at the point where the nail curves or hooks downward. Position the clipper blades so that pressure is applied from top to bottom and not from side to side, to help minimize splintering of the nail.

Close the clippers to make your first cut. Check the nail closely after trimming and repeat if necessary. It is better to make several small cuts, taking the nail gradually shorter each time, than it is to accidentally cut off too much during an overzealous first attempt.

## What should I do if accidentally hit the quick and my cat's nail bleeds?

Despite your best efforts, it is possible that you will occasionally hit a quick when trimming nails. Hopefully, you are making small cuts and you only cut the very tip of the quick, resulting in minimal discomfort and just a small drop of blood. If this happens, you can apply a small amount of styptic powder (available at any pet supply store) to the end of your cat's nail to stop the bleeding. If you do not have any styptic powder, use flour or cornstarch.

Is there a way to make this process more pleasant for my cat?
With some training, your cat can learn to tolerate or even enjoy nail trims. Your goal is to make this process as pleasant for your cat as possible. As discussed previously, ensure that you are applying the minimal amount of restraint necessary to accomplish the nail trim. Many cats resent restraint more than the actual nail trim, so you may be surprised at how smoothly things can go with minimal restraint. Additionally, give your cat small treats frequently throughout the process. Giving a small treat after you finish clipping the nails on each paw will help your cat develop a positive association with nail trims.

Finally, do not rush. Go at your cat's pace. If your cat loathes restraint and nail trims, do not set a goal of clipping all of your cat's nails in one sitting. If her nails truly need to be clipped immediately, take her to a veterinarian or groomer, then start working on at-home nail trims after the initial nail trim has been performed. When you attempt to trim your cat's nails, only do what she will permit. That may mean that you spend the first day simply working up to being able to handle your cat's feet, using a lot of praise and treats. Once your cat will comfortably allow her feet to be handled, you can try clipping one nail and then immediately offer a treat. In the following days, aim to work
up to two nails, three nails, and eventually clipping one entire paw in a sitting. It may take several weeks to build up to performing a full nail trim and that is perfectly normal and acceptable. The goal is to make nail trims positive and as stress-free as possible for your cat. Taking the time to desensitize your cat to handling and nail trims will pay off in the long run, by making all of your cat's future nail trims more pleasant.


The blood supply (Quick) in a short nail.


Note how the blood supply gets longer as the nail grows.

If you clip or file or dremel a little off of a long nail every few days, the blood supply will continue to recede.


As the nail gets shorter, so does the blood supply.


Only when the nail is kept short can it be trimmed without bleeding. If the same cut had been made on the
long nail in picture 2, it would have the same cut had been made on the
long nail in picture 2 , it would have caused bleeding.


A properly trimmed nail.

# Litter Training Kittens 101: When To Start and How To Do It 

By Jamie Lovejoy, DVM

Most adult cats will naturally seek out a sandy, granular place to eliminate, but young kittens might need a little help figuring out proper litter box habits.

When litter training kittens, there are a few things you can do to help set your kitten up for success. Here are some cat potty training tips on when to start, how to choose litter boxes, how to pick the right type of litter, how and where to set up the litter boxes, and how to help your kitten master the litter box.

## When to Start Litter Training Kittens

In the first few weeks after birth, mother cats stimulate their kittens to eliminate, and they clean them up afterward. During that time, kittens don't need litter boxes.
You can start litter training kittens at around 4 weeks of age by offering kitten-friendly litter boxes. This coincides with the time that kittens start weaning.
If you adopt an older kitten or adult cat, you can start litter box training as soon as you bring them home. You will need the right cat potty training supplies to be set up before they come to their new home.

## How to Litter Train Your Kitten or Cat

Follow these steps for cat potty training success.

## Choose a Litter Box

While deciding on a litter box may seem like a trivial task, it actually does make a big difference to your kitten.

## Get the Right Size Litter Box

Full-size boxes may be too big and intimidating for a small kitten. Dr. Sally J. Foote, DVM, a feline behavior consultant certified by the International Association of Animal Behavior Consultants (IAABC), recommends a litter tray that is 13 by 9 inches for kittens.
If your cat is older or you have other adult cats in the home, they will need boxes that are full-size, while your kitten needs their smaller litter boxes to start with.
The litter box will need to grow with your kitten. Your cat's litter box should be approximately 1 1/2 times their length. You will need to size up as your kitten gets bigger.

## Provide More Than One Litter Box

At a minimum, there should be one more litter box in your house than the number of cats. If you have two cats, there should be three boxes. If you have five cats, there should be at least six boxes.

## Uncovered versus Covered Litter Boxes

Many cats prefer to use an uncovered box.
"In nature, cats don't want to get caught by a predator inside an enclosed area," says IAABCcertified cat behavior consultant Mieshelle Nagelschneider. Many of her clients believe that their cats prefer the privacy of a cover, but she says that "cats don't want to feel trapped" when they use their litter box.
Whether or not your cat prefers a restroom with or without a roof comes down to your kitty's personal preference, says Dr. Foote, who has found that some cats prefer an open space to eliminate, while others prefer an enclosed space.
Dr. Foote suggests giving your kitten a choice in the beginning to see what they prefer.

## Pick the Right Type of Litter

Research has shown that most cats prefer fine-grain litters, presumably because they have a softer feel.
When it comes to clumping or non-clumping litters, cats have their own preferences. Of course, you might prefer clumping for the ease of scooping.
In terms of clay litter versus litter made from other materials, some cats won't use a box that has corn- or wheat-based litter because it smells like food, Nagelschneider says.
Try out a few types to make sure you get the type of litter that your kitten prefers.

## Plan Where to Put the Litter Boxes

Litter box placement and availability can be a critical factor in encouraging your kitten to use the box.

## Don't Hide the Litter Boxes

If the boxes are all in the same corner, they are effectively one big box, which can lead to trouble if your kitties don't want to share.
It's tempting to put litter boxes in closets and corners because we don't want them to be visible, but this should be avoided. Remember that cats also don't like to feel cornered or trapped during toilet time.
They'll also need some sort of light to see and find their boxes, so if there's no ambient light in the place where you keep the litter box, try using a night-light, Nagelschneider says.
Avoid Distractions
Set up your kitten's litter box in an area that has few things to distract them from getting down to business.
For kittens having trouble focusing, you may have to remove the option of having other "interesting" places to urinate. Try keeping your kitten in a small room without any rugs or carpeting
and only a small amount of bedding to try and keep them focused until they master using the litter box.

## Place Litter Boxes on Every Floor

The boxes should be spread out, with at least one on every floor of your home.
Make it easy for your cat to get to the litter boxes. "Don’t make them have to go down the stairs, through the playroom, through the kitty door, and into the utility room," Nagelschneider says. "Cat's don't want to go any farther than we do to reach the bathroom."
It's particularly important to remember that your kitten will eventually become an adult cat, so putting a litter box up on a shelf or down many flights of stairs will make it much harder to get to when they are older and arthritic.

## Introduce Your Kitten to the Litter Box

Once you have your supplies picked out and litter box areas set up, here's how you can help litter train your kitten.

Step 1: Show your kitten the locations of each litter box and let your kitten sniff them.
Step 2: Gently place your kitten in the litter box. They may instinctively start pawing at the litter or even using the litter box. If they don't, run your fingers through the clean litter to demonstrate the pawing action.

Step 3: If your kitten didn't use one of the boxes in the initial introduction, try placing your kitten in one of the boxes each time they eat, drink, or wake up from a nap, until they begin using the box on their own.

## Reinforce Good Litter Box Habits

When your kitten uses the litter box appropriately, reward them with their favorite treat to create a positive association with the activity.
For this to work, the treat must be given immediately after they have left the box so they associate the activity with the reward.
If your kitten makes a mistake, do NOT punish them or yell at them. Calmly clean up the mess with an enzymatic cleaner and do not react in any other way.

## Keep the Litter Boxes Clean

Try to scoop your kitten's litter box after every elimination. You don't want your kitten developing an aversion to the box during the training process. After scooping, add some clean litter to maintain a litter depth of 2 to 3 inches to give your kitty plenty of room to dig.
Once your kitten is older and uses the litter box consistently, you can scoop daily instead of each time your kitten uses the box.

Periodically empty out all of the litter in each box, clean the boxes, and fill them with clean litter. Most non-scoop litters will have their own recommendations on the label for how frequently they should be changed.
Clumping litters only need to be changed out completely every week or couple of weeks, depending on how many cats you have using the boxes.

## What to Do if Your Kitten Won't Use the Litter Box

If your kitten is having a hard time with litter box training and is peeing outside the box, try these steps:

1. Carefully evaluate your litter box setup. Every kitten has slightly different preferences. Make sure that the litter boxes:

- Are easily accessible
- Are located in quiet spots
- Are not hidden in a corner
- Are not being guarded by other cats

2. Consider changing the litter box or type of litter. You may want to get a new box (covered versus uncovered or one with low sides) and place it nearby to see if your kitten prefers another box. Or keep the same box and only change the litter type to see if it is the box or the litter that is the issue. 3. Scoop more often and replace all litter more often.
3. Consider using pheromone diffusers near the litter box to relieve stress and make your kitten more comfortable with their surroundings. These diffusers, when placed in the room with the litter box, make kittens feel that they have marked their territory.
4. Bring your kitten to your veterinarian to check for parasites, urinary tract infections, or other medical issues that may promote inappropriate elimination. These are rare with kittens, but they should not be overlooked.

Your veterinarian can always help you troubleshoot your kitten's litter box issues as well. Above all, remember to be patient! Training takes time, but your kitten will master these habits with your love, support, and attention.

Introducing New Adult Cats

By Catherine Barnette, DVM

## Will my current cat readily accept a new cat?

There is no simple answer to this question. In some cases, two laid-back adult cats can be easily introduced with minimal drama. In other cases, however, the introduction does not go as smoothly. Some adult cats may physically fight with each other, resulting in potential injuries. Even in the absence of physical aggression, introductions can provoke anxiety that leads to inappropriate elimination, decreased appetite, or other signs of stress in one or both cats.

Fortunately, you can increase the likelihood of a successful introduction by introducing two adult cats slowly and gradually.

## How can I gradually introduce two adult cats?

When you bring your new cat home, set up a small area in which you can confine the new cat. You can use a bathroom, a laundry room, or even a spare bedroom. Set up everything that your new cat will need in this area, including food, water, and a litter box. Allow your new cat to remain in this "safe space" for a few days, until they become more comfortable with their new environment. Visit with both cats (separately) on a regular basis, so you can begin to bond with your new cat while maintaining your bond with your old cat. Your cats may interact under the door during this stage; encourage their interaction if they seem to be playful and are interacting positively, but limit access to the door if these interactions appear to be causing distress for either cat.

Once your new cat seems comfortable with the new environment, do a "location swap." Without allowing your cats to directly interact with each other, allow your old cat to enter the new cat's space and allow your new cat to explore the rest of your home. This allows your cats to become more familiar with each other's smells, while also providing your new cat with some time to explore the home. After they have had a couple of hours to explore, return each cat to their own space. After the two cats have become familiar with each other's scents through several location swaps, it is time to allow them visual access to each other. You can accomplish this in a number of ways, such as letting them interact through a partially ajar door or opening the door but blocking the opening with baby gates. The goal is to allow the two cats to see each other, but not physically interact, so each cat can become more accustomed to the other's presence.

If visual interaction is proceeding without any signs of aggression or stress, begin allowing your cats to spend time together. Ideally, this physical introduction should be performed at a time when both cats are distracted. For example, you may want to feed both of the cats near each other or engage both cats in play. Having a distraction can make introductions less intense and provide an outlet for any nervous energy. Remain nearby, so that you can easily separate the cats if either one shows signs of distress. Remember, you are not simply waiting for a fight to break out; you want to pick up on early signs of aggression or stress, so that you can separate the two cats before things escalate. Once things escalate to a fight, it will be much more difficult to start over and teach the cats to like each other!

After your cats have had several successful supervised interactions, you can begin allowing them to interact without direct supervision. Begin with brief periods of unsupervised interaction, gradually allowing your two cats to spend more and more time together.

## What should I do if my cats have a negative interaction during these gradual introductions?

If your cats experience a negative interaction (for example, if one cat begins to hiss or growl at the other), return to the last step in the progression that was going well. For example, if hissing or growling began when your cats were allowed visual access to each other, return to interactions under the door and daily "location swapping" to familiarize the cats with each other.

Are there any other tools that might help increase my cats' likelihood of a successful introduction?

Feline pheromones can help reduce signs of stress in cats. These pheromones are available in both spray and diffuser forms, allowing you to choose a delivery method that works for you. In many cases, the stress reduction provided by pheromones may be enough to relax the cats and facilitate a smoother introduction.

If pheromones alone are not enough, or you are encountering more significant challenges, talk to your veterinarian. Your veterinarian can make behavioral suggestions to help you introduce your cats and can also determine whether your cat may be a candidate for prescription anti-anxiety medication.

## Indoor vs Outdoor Cats: What to Know Before Deciding

Ready for a hot-button issue? We're talking about the benefits and drawbacks of keeping your cat inside-or letting them roam around outside.

You can barely Google this term without wading into heated debates among pet owners about where a "good" cat owner will allow their pet to go. Our cats are precious to us, so the passion makes sense. But we're hoping to provide no-judgment, evidence-based real talk about what we know happens to cats based on their daily wanderings.

Here's what you need to know about outdoor cats versus indoor cats.

## What are the Health Concerns of Letting a Cat Outdoors?

While people continue to have their cats in and out of the house, experts are pretty clear that the indoors is the clear winner when it comes to keeping your cat safe and healthy.
One of the big reasons is because of life expectancy. As WebMD explains, indoor cats live significantly longer on average (up to 17 years!) than outdoor cats, who tend to live between two and five years.
Beyond longevity, outdoor cats get injured more frequently. Outdoor cat owners will tell you they've had their cats come home with a variety of injuries from getting into fights with other animals. Unfortunately, they're more likely to contract feline leukemia virus and feline immunodeficiency virus. An outdoor cat may also bring pests home with them, including fleas and intestinal parasites, which can then infest you or your home.

## Is There Any Such Thing as a Natural Indoor or Outdoor cat?

Some cats might show a preference for staying indoors or venturing outside. You may have noticed that your cat is always trying to dash out the door or is totally content lounging by the window. Cats are individuals, and their personality might make them more adventurous or more reluctant to go out.
The idea that cats are super independent creatures is a bit of a myth. Cats spending all their time inside can actually get quite dependent on their owners, since you're their main source of entertainment, food, and affection.
If you've got a closet full of kitty toys, you'll know that many cats thrive on what behaviorists call "enrichment," essentially, play. Bored cats can become troublemakers, they might chew on wires, scratch furniture, or show aggressive behavior. When a cat gets to use their brain and body, they're a lot happier.
The outdoors is a very enriching spot for cats- there are sounds, smells, and scurrying animals-a real paradise of play.

But the Animal Humane Society is quick to point out your cat can get plenty of enrichment indoors without the risks of being outside. Not to mention, those scurrying animals will thank you (outdoor cats in the U.S. kill some 2.4 billion birds and 12.3 billion small animals every year).

## What are the Pros and Cons of an Indoor Cat?

Pros of an Indoor cat:

- Longer life span
- Fewer injuries on average
- Still a totally happy cat, especially with enrichment activities
- 

Cons of an Indoor cat:

- Some cats may be escape artists or constantly push to get outside
- Easier for cats to become bored
- May become overly dependent on owner's attention

What are the Pros and Cons of an Outdoor Cat?

Pros of an Outdoor cat:

- Plenty of activities to keep cat's body and brain active
- No wrestling with the cat about not going outside
- Fewer litter box messes

Cons of an Outdoor cat:

- Significantly shorter average lifespan
- Injuries more likely (and therefore increased vet bills)


## Enrichment Ideas for Your Cat

By Tabitha Kucera
Cats are amazing, intelligent creatures. Their lifestyle reflects the predatory skills and behaviors needed to hunt food in the wild. A cat's day includes the need to rest, stalk, chase, pounce, kill, play, eat, and groom among other things. When we don't provide them opportunities to do these things, they get bored. Boredom can lead to a variety of problems such as destructive behaviors, aggression, anxiety, and more. We all want our cats to be living their best lives!

## What Is Enrichment?

Cats must have opportunities to express their natural behaviors. An enriched environment should provide various types of scratching surfaces, outlets for predatory and prey behavior, safe places, and should respect all five of your cat's senses which provides an environment in which an animal has variety, choice, and control over their daily activities.

- Provides needed mental and physical stimulation
- Decreases stress and boredom
- Decreases unwanted behaviors
- Improves overall quality of life


## How Do You Provide Enrichment for Your Cat?

## Food Based Enrichment

Food puzzles help to slow down eating, prevent boredom and obesity, and allow cats to eat more instinctively by allowing them to forage and "hunt" for their food. There are various food dispensing toys for cats that you can purchase, and you can even make your own. Start with an easy puzzle and work up to more difficult puzzles based on your individual cat's preference.

- Lunch paper bag/paper bag: put catnip, catnip covered toy mice, or treats inside. They can explore, pounce, and kill (destroy the bag)- It's a great hiding space and a fun toy all at the same time.
- Paper towel roll puzzle toys: cut paper towel roll in half, fold in ends and cut a few small to large holes, place in treats. As cats begin to use these more, cut smaller holes to make it more fun for the cats!
- Water bottles puzzle toys: Take empty water bottles, remove wrapper, cut a few small to large holes, can leave lid on or off for increasing difficulty for the puzzle toys


## Sensory Enrichment

Scent signals are an important part of cat communication and exploration. Cats exposed to new odors are more active and exploratory. Catnip, silvervine, cat grasses, safe houseplants, toys with owner's scent, and pheromones such as Feliway all help encourage exploration and play. Placing a small amount of a scent in paper ball toys, boxes, bags, etc. can provide sensory enrichment.

- Visual: A few examples of visual enrichment include interactive cat toys, birdfeeders, cat videos on YouTube, blowing bubbles, and pinwheels. Remember, when playing these videos or letting your kitty watch birds only do so for short periods of time to avoid your cat from becoming frustrated.
- Auditory: This can include reading a story to cats, playing bird and nature sounds, and playing music made specifically for cats. (Through a cat's ear, iCalmCat).
- Taste: Offer a variety of different flavored and textured treats
- Touch: Many animals respond positively to things like petting and brushing. Along with the touch comes social interaction, which ensures that these social animals receive the attention they need. Make sure to identify the kind of touch the cat appreciates.

A great example of sensory enrichment that hits all their senses is placing delicious treats in a ball pit for your cats to forage around for.

## Environmental Enrichment

Provide a variety of horizontal and vertical perches and hiding places. Cats will enjoy things like window perches, cat trees, and cat-friendly shelving. Incorporating safe hiding areas is also crucial and allows the cats to get away if needed. Hiding places can be cardboard boxes, tunnels, and paper bags. Cats also need to scratch, so provide various types of scratching surfaces. Scratching posts should be steady and a minimum of three feet to allow them to fully extend their body when scratching.

## Social Interactions

All companion animals, including cats, benefit from positive, consistent interactions with their humans. Cats will experience less stress when allowed to choose whether or not to interact with you, rather than having interactions forced upon them. If the cat appears relaxed and wants to interact, it's best to focus petting around the head and cheeks. When your cat moves away, don't force further contact by following your cat or picking them up. Brushing and petting your cats before bed is a good example of how to provide them with positive, consistent, and predictable social interactions.

## Outdoor Time

You can give your cat some safe time outdoors by building an outdoor enclosure (often called a catio) and/or walking your cat. Cats can be harness trained or can enjoy walks in a cat stroller.

## Train Your Cat

Another form of enrichment can be clicker training your cat. Cats are intelligent and clicker training is a great way to mentally stimulate your cat and teach them new tricks!

There are many benefits to clicker training your cat, it boosts your cat's confidence, encourages creativity and initiative, and helps strengthen the bond between you and your cat.

There is a common misconception that cats cannot be trained and if they can be trained, it is a lot more difficult than dogs. Both of those statements are false. When owners feel that their cats cannot be trained, they also believe cats behavioral problems cannot be resolved. This can often result in fatal consequences for cats; including euthanasia and relinquishment.

Cats can be taught everything including foundation behaviors (targeting, attention), positive husbandry behaviors (nail trims, brushing, and handling), and fun tricks (roll over, high five). Training can also be very effective in stopping and replacing unwanted behaviors.

In addition to the recommendations mentioned above, remember to always provide your cats with variety and choice and see what they like best. Lastly, the type of enrichment you can offer your cat is only limited by your imagination so have fun with it!


How to Safely Introduce Cats and Newborn Babies
By Amy Shojai

If you're bringing a new baby into your home, take time to pay attention to how your cat will handle the changes. Excluding your pet from this happy time will confuse your cat and leave it sad, stressed, and potentially poised to act out in unacceptable ways, like missing the litter box. Keep the peace by properly introducing your child and your cat to pave the way for a joyful future.

## How to Introduce a Cat + Baby



The Spruce / Catherine Song

## Why Cat Introductions Matter

Remember that your cat was there first. If your cat hasn't been exposed to infants, toddlers, or young children and has only been around adults, put yourself in your pet's paws. To a cat, this small human being might as well be a tiny creature from Mars. A baby smells different, sounds odd with a higher-pitched voice, and though an infant is small and closer to a cat's level, it moves erratically, which can cause anxiety in a feline. As a result, your cat may switch into stranger-danger mode and hide, or become defensive and try to swat at the scary little alien to make it go away. To avoid these scenarios, you'll need a plan that begins well before you bring your baby home.

## Let Your Cat Tour the Nursery

Prepare your cat months before your infant comes home. Begin as you're decorating the nursery. Understand that cats love the status quo, so they become sensitive to any changes going on in a home. Make gradual changes to your home. Allow your cat to investigate the new things you're bringing into the space so it doesn't feel left out and nervous. But be aware that your cat will likely want to investigate new furniture or items. You may even find your cat sleeping in the bassinet or batting at the baby's play mobile. For the times you can't supervise your cat in the new space, put up a gate to keep your pet out of the room, or simply shut the door.

Paws Off

If you want to discourage your cat from sleeping in the crib, place a carpet protector, nubby side up, on the mattress. To prevent your cat from making the changing table its new perch, place a long piece of cardboard covered with double-sided tape on the surface. Cats hate walking on anything prickly or sticky.

## Get Your Cat Used to a Baby's Cry

Tape the sound of an infant crying so that your kitty gets a warning of what to expect. Cats use sounds to communicate, and infant cries sound similar to kitten distress cries, so it can be upsetting for cats to hear this. Be matter of fact, and if your cat calmly investigates the sound, reward with soothing praise. Should your pet become upset by the noise, begin again, but first start playing a favorite game together before you turn on the recording. That way, your cat will associate having a pleasant time with an infant's cries.

## Prepare Your Cat for New Smells

Cats communicate with scent. They identify those that smell similar to them as friends. There are a few stress-free ways to bring new smells into your cat's world.

- Begin wearing baby powder or baby lotion on your hands weeks in advance. That way, your cat associates these smells with someone it already knows and loves.
- Bring home something that has your infant's smell, like a receiving blanket, and let your cat sniff it for an advanced introduction.
- Pet your cat with a pair of infant socks before the baby is born. Have your baby wear the socks home from the hospital. Your baby will smell like your cat, and your pet will identify your infant as part of the family right from the start.


## Shower Your Cat With Praise

When you bring home your baby, you'll no doubt be exhausted, but there's still some work to do with your infant and cat. Quietly bring your baby and cat together. Let your cat sniff your baby's foot. Try to do this while your baby is wearing the feline-scented sock so your cat can see that there's nothing to fear. Be sure to continuously praise your cat when it behaves in a confident, calm manner. Once your cat understands that treating a baby gently results in praise, things should go smoothly between the two. Include your cat when you're feeding your baby by offering treats in the same room. That way, the cat associates positive things with the baby's presence. A number of these tips are also used when introducing a new cat into a home with an existing cat.

## Respect Your Cat's Space

As your baby grows, teach your child to respect the cat, too. But from the start, create a private retreat where it can escape a fast crawling baby and a toddler's grabbing hands. Mutual respect and careful introductions grow into a loving bond as your infant grows up alongside a happy cat. And that's a purr-fect relationship that will last a lifetime.

## How to Take a Car Trip With Your Cat

By Jenna Stregowski

It's no secret that most cats hate car rides. During their lives, most cats only take occasional car trips. If short trips are stressful for your cat, then long trips will probably be worse. If you are planning a long car trip with your cat, you may feel overwhelmed and worried, especially if you know your cat gets stressed in the car. While you may never be able to get your cat to love car rides, you might be able to get him used to them enough to reduce his stress.

How to Get Your Cat Used to the Car
Chances are your cat associates car rides with vet visits. Most cats get very stressed at the vet, so this association can make car rides dreadful for everyone. Don't let this keep you from taking your
cat to the vet for annual or biannual check-ups. Instead, start practicing the routine of a car until your cat starts to relax. This process can eventually reduce the stress associated with car trips.

First, begin leaving your cat carrier out with the door open so your cat can explore it. Put a soft bed or blanket inside along with a favorite toy and/or some extra tasty treats. Don't close your cat inside yet, just let him get used to it. Offer additional treats if he gets to the point where he is willing to remain in the carrier for a few minutes. If your cat is worried about the carrier, consider spraying the inside with a feline pheromone like Feliway to promote a sense of calm. However, do not directly spray your cat with pheromones. You can also try putting some catnip inside the carrier if this is something your cat enjoys.

Next, practice closing your cat in the carrier as if you are about to go for a car ride. Pick up the carrier and walk around with it. Afterward, let your cat out and offer valuable treats. Increase the length of time you walk around with your cat in the carrier. Once your cat starts to relax, try bringing the carrier out to the car, but don't go anywhere. Reward them with another high-value treat.

Then, add small trips to nowhere. Take a ride around the house, then bring your cat back home and let him out of the carrier. Once again, offer plenty of yummy treats.

Gradually increase the length of car trips without using your cat too far. If your cat is vocalizing loudly or panting, then the trips became too long too quickly. Slow down the process and see if your cat adjusts.

## Preparing for a Long Trip

If you plan to take a longer trip, perhaps a few hours or more, then it's best to get your cat ready in advance.

Before the actual trip, be sure to get some things together. Make sure your cat is wearing an easy release collar or harness with identification. A microchip is also important in case your cat gets loose or lost and the collar or harness falls off. Make a list of emergency vets along the way in case your cat becomes ill.

The night before travel, put your cat in a small room with the carrier, a litter box, food, and water. This will make it easier to get your cat in the carrier the next day. Plus, it can help your cat adjust to a smaller space.

If the trip is more than two or three hours long, then your cat will need a break. Bring a litter pan, food, and water along with you on the trip. Take a break every two or three hours so your cat can relax, eat and drink, and use the litter box.

## What to Do If Your Cat Won't Get Used to the Car

Some cats will never be able to calm down for car rides, despite your best efforts. These cats may benefit from calming supplements and/or medications. Talk to your vet about the best options for your cat.

Nutritional supplements like Solliquin can help your cat relax without the use of pharmaceutical medications. Test this out in advance before you venture out for a long trip.

If supplements are ineffective, then it might be time to try a stronger medication. Sedation may be the best option for the most anxious cats.

## When You Arrive at your Destination

Whether you are moving to a new home or taking your cat on vacation, be aware that your cat needs time to adjust to his new environment. Gradually introduce your cat to his new space until he feels comfortable. Be patient as this can take time.

## Misconceptions of Indoor Cats

Dr. Georgette Wilson
Cats are mysterious enough on their own, without pesky myths and misconceptions mucking things up. Even though indoor cats typically live a safer, healthier lifestyle than their free-roaming feral friends, they aren't without risk. So today, we're debunking some of the most common myths about indoor cats.


## My Indoor Cat Can't Get Fleas because My Home is Clean

Even if your home is sparkling clean, your indoor cat can still get fleas. Fleas can make their way indoors on shoes, with visitors, or through other pets that go outside. Even rodents that may take refuge in your home during the cooler months can bring in fleas. The best way to truly protect against fleas is to keep all your pets, including indoor-only cats, on a regular, year-round flea preventative.

## Indoor Cats Only Need One Litter Box

To minimize the chance of your cat going outside their litter box - and choosing your floors and laundry instead - they should have a choice when it comes to where they potty. Cats are likely to avoid a box that already has "deposits" in it or one that they've developed a negative association with. The general rule-of-thumb is to have one more box than the number of cats you have. Ideally, keep the litter boxes in different locations and not next to one another.

## Indoor Cats Miss Their Hunting Instinct

While your indoor cat isn't hunting prey like their outdoor feline friends, you can provide the same stimulation indoors to help to satisfy that instinct. You can engage your cat's primal instinct with interactive feeders, puzzle toys, laser pointers, and other fun toys and play.

## Pregnant Women Must Get Rid of Their Cats

Pregnant women can have cats, but some caution should be exercised when dealing with the litter box. When cleaning a litter box, pregnant women can be at risk for Toxoplasma, a parasite which can live in cats and be shed in cat poop. Exposure to the Toxoplasma organism early in pregnancy can cause birth defects or miscarriage in women.

If you have cats and become pregnant, be sure to talk with your doctor and always wear gloves and wash your hands after scooping the litter box. Cleaning the litter box every day can minimize exposure risk since Toxoplasma isn't infective in fresh stool.

## Indoor Cats Don’t Need Veterinary Care

It's important for indoor cats to get a veterinary check-up at least once a year. Even indoor-only cats can develop a variety of medical conditions and diseases. After all, diabetes, hyperthyroidism, high blood pressure, kidney disease, and even cancer don't respect walls and doors. Indoor cats can also contract viral, bacterial, and parasitic infections, as these nasties can come into your home on your shoes and clothes, other cats, or dogs in the home that can go outside.

## Indoor Cats Don’t Need to be Microchipped

If your cat gets out of your home, how will you find them? Indoor cats do occasionally get out, especially during home renovations, when moving, or even when friends and family come to visit. An ASPCA survey found that only $74 \%$ of lost cats are reunited with their owners. If your cat gets out and doesn't have visible identification or a microchip, the probability of them getting returned to you is significantly lower than if they are easily identified.

## The Outdoors Stay Outside

While your cat may not leave the house, you certainly do. And with you, comes a variety of unwanted "guests" like ticks, fleas, worm eggs, etc. Visiting friends, pets, and rodents can carry them in, too. Even neighborhood strays that visit your cats from the other side of a screen door or window can pass along germs and parasites (e.g., fleas). The best line of defense for your indoor cat against outside invaders is to keep them up-to-date on their vaccines and on parasite protection year around.

