

Health Care For Feral Cats: Guidelines for Colony Caretakers

In the previous chapters, we provided the how-tos of carrying out the trapping, transporting, and fostering of feral cats. Caretakers should be familiar with the following important information so they may make informed decisions and help properly manage the health care of their colony.

Overall Health and Life Expectancy

Those opposed to TNR programs claim outdoor cats are suffering, diseased, and living lives of misery. No doubt there are some cats in *unmanaged* colonies in unhealthy condition, but more often we see managed colonies (i.e. colonies in which TNR is implemented and the cats are fed regularly) with hardy survivors who are healthy. A New Zealand study published in 2019 assessed the health of pet cats, managed colony cats, and unmanaged colony cats and found “that stray cats—particularly managed stray cats—can have reasonable welfare that is potentially comparable to companion cats,” (Zito et al., 2019).

In an earlier, highly-reported study, veterinarians looked at the health of feral cats by measuring the body condition of cats *prior* to being trapped and sterilized. When trapped initially, the cats were reported to be lean but not emaciated. Veterinarians also measured the falciform fat pad, or the deposit of fat along each side of the abdomen, and found each cat to have a small amount of fat present; meaning the cats were eating enough to be able to store fat and maintain a fairly stable weight (Scott et al., 2002, web).

As for the occurrence of viral diseases such as feline leukemia (FeLV) and feline immu-

nodeficiency virus (FIV), large epidemiologic studies “indicate FeLV and FIV are present in approximately 4% of feral cats, which is not substantially different from the infection rate reported for pet cats” (Levy and Crawford, 2004). Furthermore, models of the transmission of the two diseases among feral cat populations “indicate that neither virus impacts overall colony size,” meaning these viruses are not quickly killing infected cats, but rather cats are capable of living years with either disease (Levy and Crawford, 2004).



Feral cats, Adams Morgan, Washington, D.C. These cats recovered fully from parasites and infection after receiving medical care as part of a TNR program.

Judy M. Zukoski

The life expectancy of a feral cat is still highly debated, with some sources claiming a feral cat will only live to be about two years old. Numerous studies show, however, the life expectancy is greatly increased for cats who have been TNR'd. A study on a Florida college campus over the course of 11 years reported that more than 80 percent of the cats had been residents for more than six years, which is comparable to the mean lifespan of 7.1 years for household cats (Levy, 2003). A study from 2008 through 2017 on the effects of a TNR pro-

gram on a colony at the University of New South Wales campus (Sydney, Australia) recorded that most of the nine cats who were present from the start and until the end of the TNR program were older than 10 years of age (Swarbrick and Rand, 2018). Two of the six cats in 2017 who had immigrated onto the campus were also over 10 years old (Swarbrick and Rand, 2018).

In 2019, Alley Cat Rescue surveyed rescue organizations across the United States that provide TNR services to their communities. Out of the 218 groups that responded, 72 percent reported the average age of local colony cats to be between two to six years old. Another 20 percent said the feral cats they assist were between six and ten years old, with more than 25 percent of respondents reporting feral cats in their communities who were 13 years or older (Clifton, 2019).

Feline Viral Disease

The three most prevalent feline viral diseases are feline infectious peritonitis (FIP), feline leukemia virus (FeLV), and feline immunodeficiency virus (FIV). These viruses are specific to cats and cannot be transmitted to humans or other animals. Feral cats who survive to adulthood and are well fed are usually robust animals and largely immune to local diseases.

Feline Infectious Peritonitis (FIP)

Feline infectious peritonitis (FIP) is a viral disease caused by certain strains of the feline coronavirus. Infected cats usually show no symptoms in the initial stages of coronavirus infection, and the virus only progresses into clinical FIP in a small number of infected cats - five to 10 percent — and only when there is a mutation of the virus or an abnormality in the immune response (“Feline Infectious Peritonitis,”

2020).



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Breakfast for the feral colony at the Buenos Aires Botanical Gardens, Argentina.

For cats who develop FIP, symptoms usually appear suddenly and increase in severity, usually resulting in death (without treatment - see "Treatment" section below). The cats often develop nonspecific symptoms such as weight loss, loss of appetite, depression, roughness of hair, and fever. Tissues around the infected cells, usually in the abdomen, kidney, or brain, also become intensely inflamed (“Feline Infectious Peritonitis,” 2020).

Because the symptoms of FIP are not uniform, often manifesting differently in different cats, and sometimes appearing similar to those other diseases, there is no definitive way to diagnose it without a biopsy. Veterinarians often diagnose FIP based on an evaluation of the cat’s history and symp-

toms in combination with coronavirus test results ("Feline Infectious Peritonitis," 2014).

There are two forms of the virus. In the wet ("effusive") form, cats will have an accumulation of fluid in the abdominal cavity, the chest cavity, or both. In addition to the symptoms of both forms, cats with the wet form can show labored breathing and abdominal distension. In the dry ("noneffusive") form, cats will have small accumulations of inflammatory cells form in various organs. Symptoms of the dry form depend on which organs are affected by the inflammatory cells. For example, a cat with affected kidneys will show excessive thirst and urination. The wet form usually progresses more rapidly than the dry form, but in both cases the cat's hair will become rough and dull and he will become progressively more lethargic and depressed.

Any cat that carries any coronavirus is potentially at risk of developing FIP. However, cats with weak immune systems (including kittens, cats already infected with feline leukemia virus (FeLV), and geriatric cats) are most likely to develop the disease. Most cats that develop FIP are under two years of age, but cats of any age may develop the disease.

Although a recently developed anti-viral drug called GS-441524 (GS) has been shown to be able to cure a majority of FIP infections, its use is not practical for many feral cats as it must be administered by daily injection over a period of at least 12 weeks. The cost of the drug varies greatly between manufacturers, but is at minimum \$80 per 5 mL bottle, which is beyond the means of many rescues and caretakers. However, those with the ability and resources to treat a feral cat or kitten with GS have a good chance of saving that animal's life.

A vaccine to prevent FIP is available but its

use is controversial. The vaccine is not 100% effective and must be given before the cat is exposed to coronavirus. Since FIP is not a common ailment, the vaccine is not always recommended.

Feline Leukemia Virus (FeLV)

The feline leukemia virus (FeLV) is a cancer-causing virus. In addition to causing feline leukemia, FeLV suppresses the cat's immune system, leaving the animal vulnerable to a variety of opportunistic diseases.

The signs and symptoms of infection with FeLV are varied and include loss of appetite; poor coat condition; infections of the skin, bladder and respiratory tract; oral disease; seizures; swollen lymph nodes; fatigue; fever; weight loss; recurring bacterial and viral illnesses; anemia; diarrhea; and jaundice ("Feline Leukemia Virus," 2016). Some cats can be carriers of the disease yet show no signs of illness for many years.

Infected cats shed FeLV primarily in their saliva, although the virus may also be present in the blood, tears, feces, or urine. Some possible modes of FeLV transmission include mutual grooming, sharing food dishes and litter boxes, and in utero transfer from a mother cat to her kittens. A mother cat can also transmit FeLV to her kittens through infected milk.

A simple blood test can be performed in a veterinary office to determine if a cat has contracted FeLV; however, most TNR programs choose not to test feral cats for the disease. (Continue reading for more information on testing feral cats for viral diseases.) Whether a feral cat tests negative for the disease or she is not tested, we strongly recommend all feral cats receive an FeLV vaccine to reduce the risk of transmission.

There is no cure for FeLV, although good

supportive care can improve the quality of an infected cat's life. Nutritional support (herbs, vitamins) and other alternative treatments can help strengthen a cat's impaired immune system.

Feline Immunodeficiency Virus (FIV)

Feline immunodeficiency virus (FIV) is a retrovirus that virologists classify as a lentivirus, or "slow-acting virus." FIV suppresses a cat's immune system, compromising her ability to fight off infection. However, cats diagnosed with FIV may live long, healthy lives, never showing symptoms of the virus, though some cats may experience "recurrent illness interspersed with periods of relative health" ("Feline Immunodeficiency Virus," 2021).

Common signs and symptoms of the disease include poor coat condition; persistent fever; loss of appetite; weight loss; inflammation of the gums and mouth; chronic or recurrent skin, urinary tract, bladder, and upper respiratory infections; and a variety

of eye conditions. FIV-positive cats can also be much more susceptible to various kinds of cancer and blood diseases, and some experience seizures, or behavioral and neurological disorders ("Feline Immunodeficiency Virus," 2021).

Fortunately, FIV is not transmitted easily. The primary mode of transmission is through bite wounds. This explains why the cats most likely to become infected are free-roaming, unneutered males prone to territorial fighting. FIV does not appear to spread through casual contact among cats. There is no danger of FIV spreading through sexual contact, and only rarely does a mother pass it on to her kittens, either through birth or infected milk ("Feline Immunodeficiency Virus," 2021).

A blood test can be performed in a veterinary office to determine if a cat has contracted FIV. However, as with FeLV, most TNR programs choose not to test feral cats for the disease.

Kittens testing positive for FIV are not necessarily infected. If a kitten tests positive,

Effect of Test and Removal on FeLV Prevalence

	No Action	TNR, Testing & Euthanizing FeLV+ Cats	TNR, No Testing
# CATS STERILIZED	0	833	1500
# CATS LEFT INTACT	1500	667	0
# INTACT FEMALES (65% OF POPULATION)	975	434	0
# CATS TESTED AND EUTHANIZED	0	25	0
# FELV POSITIVE CATS (3%)	45 (all intact)	20 (all intact)	45 (all altered)
# KITTENS BORN IN ONE YEAR (5.7/FEMALE)	5558	2474	0
# FELV POSITIVE KITTENS BORN	126	56	0
TOTAL # FELV+ CATS AND KITTENS	171	76	45

the test is often detecting antibodies passed from the mother to the kitten through colostrum, the first milk that the mother cat produces. Positive kittens should be retested between four and six months of age, when any antibodies obtained from the mother cat will have disappeared.

There is a vaccine to protect against FIV, though it is rarely administered. Any cat who receives the vaccine will then test positive for the disease, because she will be carrying antibodies.

There is no cure for FIV; however, like with FeLV, proper nutrition and good supportive care can help strengthen a cat's impaired immune system and improve her quality of life.

To Test or Not to Test?

Funds for TNR programs are usually limited and testing requires time and money that may be better spent on sterilization if as a nation we are going to reduce the feral cat population. This is especially true considering that up to 50 percent of positive FeLV and FIV tests for feral cats can be false-positives, and confirmation testing is impractical (Levy and Crawford, 2004). Alley Cat Rescue does not perform testing as part of our standard TNR program; however, all cats who are placed into our adoption program or feral cats who are re-located are tested.

Operation Catnip's founder, Dr. Julie Levy, points out that the greatest cause of feline deaths in the United States is the killing — by humans — of unwanted stray and feral cats, which causes more deaths than all feline infectious diseases combined (Levy and Crawford, 2004). Subsequently, most TNR programs choose to focus their efforts and resources on sterilization rather than testing.

Vaccination Protocols

Please note: For those who are assisting outdoor cats by fostering, we highly recommend you vaccinate any pet cats prior to introducing any new cats - even if the new cat will be isolated in a spare room or in a large cage. Some viruses can be transmitted through the air and through contact with improperly cleaned food and water dishes, bedding materials, your clothing, and hands.

Typically, feral cats receive vaccinations at the time of sterilization; however, cats can be re-trapped later to update any vaccines.

Due to the rabies virus being a zoonotic disease, meaning it can be transmitted to humans, most health codes and laws require that all cats receive a rabies vaccination. (Refer to the chapter, "Zoonotic Diseases" for more information.) It is highly recommended that cats receive a three-year rabies vaccine. Kittens can receive a rabies vaccine as early as 12 weeks of age.

Feral cats should receive an FVRCP vaccine, providing funding allows. This is a combination vaccine that includes protection against rhinotracheitis, calicivirus, *Chlamydia psittaci*, and feline distemper.

The risk of vaccine-induced sarcoma, a highly malignant cancer, has caused the veterinary community to look into the possibility that cats are being over-vaccinated. In 1996, the Vaccine-Associated Feline Sarcoma Task Force (VAFSTF) formed to investigate how to prevent these sarcomas. The panel made a new vaccination recommendation that booster doses of vaccines against feline panleukopenia, feline viral rhinotracheitis and feline calicivirus (FVRCP) now only be administered every three years instead of the traditional one-year booster. The panel found that the three-year rabies vaccination provides adequate immunity, and suggested this over

annual shots to lessen the risk of sarcomas forming (“Vaccine-Associated Feline Sarcoma Task Force (2001 Report)”, 2001).

ACR strongly recommends providing three-year rabies and FVRCP vaccinations, although, in some cases, if a veterinarian has not seen a particular cat before (as is the case for first time feral cats), she may insist on giving the cat a one-year rabies vaccine instead. In our experience, we have found that feral cats who are part of managed colonies are easier to retrap after a few years than once every year. Cats who are trapped too often may become trap-shy, making retrapping much more difficult.

Additional Health Concerns

While being spayed or neutered, the veterinarian will examine the cat's skin for wounds or injuries, making sure to thoroughly clean and treat accordingly. Bite wounds and minor abrasions are common. A long-acting antibiotic injection, such as Convenia, is usually administered after sterilization procedures, and will also aid in reducing and treating any infection. For severe wounds or injuries, caretakers can administer additional antibiotics in wet food, or if the veterinary hospital or the



Louise Holton

ACR colony cat, Stumpy. She required foster care for a few extra days post-surgery.

caretaker has the space and is capable of housing the cat, she may spend a few days recovering confined to a cage.

Parasite infestations are the most common transmittable health concern for feral cats (Levy and Crawford, 2004). These include internal parasites like worms, and external parasites, such as fleas, ticks, and ear mites. As mentioned in previous chapters, it is highly recommended that TNR programs include treatments to prevent internal and external parasite infestations. Most topical applications, such as Advantage Multi, prevent and treat a wide range of parasites. For added protection and to treat severe cases of internal parasites, a topical dewormer such as Profender may be applied, and deworming pills and liquids, such as Drontal, can be crushed into wet food. (Refer to the chapter on “Zoonotic Diseases” for more information.)

Upper respiratory infections (URIs) are also common in feral cats, especially kittens. Signs and symptoms of URIs include nasal discharge, eye discharge, sneezing, and wheezing. Loss of appetite is also common in cats with URIs because their sense of smell is decreased due to a stuffy nose. A long-acting antibiotic injection can be administered or daily antibiotics, such as Clavamox or Amoxicillin, can be added to wet food for treatment of secondary bacterial infections, which often develop during the viral infection. For cats who can be handled, antibiotic eye ointments can also be administered. (Refer to the chapter, “Feral Kittens and Pregnant Cats” for more information.)

When they have already been trapped, cats should also receive a dental exam, because dental care is very important to a cat's overall health. Dental disease is a prevalent health concern for feral cats. In the colonies that Alley Cat Rescue manages, we have found that some older cats who lost weight and stopped eating were suffering from dental problems. We retrapped those

cats and our veterinarians removed some infected or damaged teeth, and the cats gained back their weight. Some cats, especially those infected with FeLV or FIV, are prone to stomatitis, or the inflammation of the mouth. In our experience, the best treatment for this is to remove all teeth and treat flare-up conditions with antibiotics.

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Hospice Care

Hospice care for terminally ill and aging companion animals has become more popular over the years. It is similar to long-term hospice care for terminally ill humans. With the guidance of trained veterinarians, animal guardians can administer pain killers and other medications, and can nurse their sick animals until they either die naturally, or until the guardian feels the quality of the cat's life is poor enough to consider euthanasia.

ACR feels that the hospice care concept is al-

so an appropriate one to consider for aging and terminally ill feral cats. Some feral cats, by old age, have come to trust their caretakers to the point that it may be possible to trap the cat and provide in-home hospice care. However, all caution should still be used. Even though the cat is elderly, she is still feral and should be confined to a large cage. More information can be found in the Helpful Resources section.

If in-home hospice care is not possible and the cat can be trapped, caretakers may consider euthanasia. However, if it becomes too traumatic for a sick cat to be trapped, and you are unable to do so after several attempts, it may be kinder to leave her alone to die in peace.

We are sure that many caretakers of animals have felt that perhaps they should have allowed their cat or dog to die in peace alone, and at other times have felt that perhaps the animal should have been euthanized sooner to prevent her from suffering further. Everyone goes through this during a time of grieving, and feral cat colony caretakers are no different. These are hard decisions to make. However, they need to be made at some point. It is therefore worth considering ahead of time, and discussing with your veterinarian what procedures to follow.

Euthanasia

Veterinarians and colony caretakers should discuss guidelines for euthanizing feral cats prior to trapping. Most feral cats are healthy, and common illnesses and infections are easily treatable with antibiotics and parasite control measures. However, for conditions that require long-term, in-house care, but where such treatment is not possible, it is more humane to euthanize the cat than it would be to release her back outside. In cases of extreme injury or illness that exceed medical capabilities, the cat should also be euthanized. In all cases, Euthanasia should only be practiced when all other options have been exhausted.

Conclusion

Keep in mind that feral cats can be difficult to handle, especially without previous experience, and this can be a major concern for some veterinarians and their staff. Bring the cats to vet appointments in covered traps and explain why to the staff if they are not used to treating feral cats. However, following the guidelines laid out in this handbook, TNR programs can be implemented with minimal mishaps. Gathering as much preliminary information as possible about a feral cat colony prior to trapping, and communicating openly will ensure that the caretaker and veterinarian are on the same page.