

Health Care for Feral Cats: Guidelines for Colony Caretakers

The purpose of this chapter and its sub-chapters is to elaborate on the health care and medical side of implementing a Trap-Neuter-Return (TNR) program. In the previous chapters, we provided the how-tos of carrying out the trapping, transporting, and fostering of feral cats. Much of the following information is meant to be a guideline in assisting veterinarians when treating feral cats. However, it is also a good idea for caretakers to be familiar with this 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 a life of extreme misery. No doubt there are some *unmanaged* colonies in unhealthy condition, but more often we see managed colonies with hardy survivors who are very healthy. The Feral Cat Spay/Neuter Project located in Washington state has noted that, after treating over 30,000 cats, their euthanasia rate is 0.2 percent, or two cats out of 1,000, and “the vast majority [are] in good physical

health” (Feral Cat Spay/Neuter Project, 2006).

In another 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 immunodeficiency 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).

Personal Account from Louise Holton

In 1990, I began helping to manage a colony of feral cats living in Adams Morgan, Washington, D.C. This colony represented a typical city feral cat colony. Fed by sympathetic neighbors, these healthy black and white cats, all with great weight on them, had shiny and clean coats. We removed 32 kittens, tamed them, and placed them into homes, thereby reducing the initial size of the colony.

The major health problem facing this particular colony was the infestation of internal parasites. The cats had coccidia, a parasite that causes severe diarrhea, and they were infected with roundworms, which can cause malnutrition. Some kittens required several deworming treatments, but all recovered. The feeders told us that before our involvement with trapping and sterilization, many of the kittens also contracted upper respiratory infections (URIs) and died. Internal parasites and URIs are typically the main culprits of illness in feral cats, especially kittens. But with a few treatments of dewormer, or an antibiotic in the case of URIs, most cats and kittens recover fully.



Judy M. Zukoski

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.

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; however, these statistics are mostly folk wisdom. A study performed 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).

In 2012, Alley Cat Rescue surveyed rescue organizations across the United States that provide TNR services to their communities and out of the 120 groups that responded, 25 percent reported the average age of colony cats to be around six to eight years old. Another 35 percent said the feral cats they assist are between nine and 12 years old, with more than 14 percent reporting feral cats in their communities to be 13 years old and above (Alley Cat Rescue, 2012).

Feral cats are opportunistic scavengers just like raccoons, opossums, and skunks. Though they are very resourceful animals, some individuals are going to experience

times of hardship (lack of food, inadequate shelter, illness). All animal species are prone to experiencing the harshness of the natural world; however, we only choose to view feral cats differently than other wild animals because of our attachment to the idea of them being companion animals. Our emotions drive us to categorize all cats as “pets” instead of recognizing the varying degrees of domestication for these animals. As Celia Hammond explains, “We surely would not consider that other wild animals, such as foxes and badgers, should be put to sleep in their prime to save them the experience of growing old and dying” (Hammond, 1980).

Though having said that, we must also point out that despite the fact that feral cats have the *ability* to survive without human intervention, we should take some responsibility in humanely caring for them since we created their situation. We owe these animals compassion to ease some of their suffering and TNR programs do just that.

Feline Viral Diseases

The three major 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. As stated before, if feral cats survive to adulthood and are well fed, they are usually robust animals and largely immune to local diseases.



Nancy North

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

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 (Cornell, “Feline Infectious Peritonitis,” 2014).

For cats who develop FIP, symptoms usually appear suddenly and increase

in severity, usually resulting in death. The cats often develop nonspecific symptoms of 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 (Cornell, "Feline Infectious Peritonitis," 2014).

Because the symptoms of FIP are not uniform, often manifesting differently in different cats and sometimes appearing similar to other diseases, there is no definitive way to diagnose it without a biopsy. Veterinarians often diagnose based on an evaluation of the cat's history and symptoms in combination with coronavirus test results (Cornell, "Feline Infectious Peritonitis," 2014).

FIP is not highly contagious and is transmitted through saliva and feces during acute infection. FIP most commonly affects cats in multi-cat households and is not as common in outdoor cats. This may be because outdoor cats bury their feces away from other colony members, while indoor cats usually use the same litter boxes.

There is no cure for FIP, and it is a fatal disease. Supportive care and high quality nutrition can help alleviate some of the body's inflammatory response to the disease. Corticosteroids, cytotoxic drugs, and antibiotics are often used to treat FIP, and fluid therapy and blood transfusions may also help as supportive care (Cornell, "Feline Infectious Peritonitis," 2014).

Feline Leukemia Virus (FeLV)

The feline leukemia virus (FeLV) is a retrovirus belonging to the subfamily *Oncovirinae*, which means it 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 (Cornell, "Feline Leukemia Virus," 2014). Some cats can be carriers of the disease and 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. Other 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.

Morris and FeLV

In 1991, when I first heard that one of my rescued feral cats, Morris, had tested positive for feline leukemia I was devastated. In those days, the feelings about FeLV were pretty negative and myths were prevalent.

Morris was trapped at four months of age and initially tested negative. However, he soon developed a severe upper respiratory infection that would not clear and he lost a lot of weight, so my veterinarian suggested another test, which he sent to the lab. This time it came back positive.

Fortunately, my veterinarian Dr. Pervaiz Manzoor, was always willing to work with me and to try new methods. He helped me stabilize Morris and was open to my suggestion of giving the cat Interferon to boost his immune system. After a few months of intensive supportive therapy, Morris actually started gaining weight and looking well again.

We retested Morris, and each time the tests come back from the lab with a negative result. The virus had obviously cleared from his bloodstream. We also retested several of the cats Morris had lived with for many years. These tests have all been negative for FeLV.

Unfortunately, later in life Morris developed severe gingivitis and stomatitis. It became an ongoing problem for him and it was very difficult for me to medicate him. He always retained some feral instincts and because eating hurt his mouth, he associated food served by me with pain.

My vet extracted most of Morris' teeth and this cured the stomatitis. Not having teeth is not the worst thing in the world for a cat who lives in a home or colony and is provided with food. He could still eat dry food, as well as moist. I found that chunky foods — the ones in pouches — were easier for Morris to eat than ground mashed foods, as these stuck to his gums and to his remaining teeth and caused more pain. To treat stomatitis, some recommend a combination of drugs a — “cocktail” consisting of Interferon, Medrol, and Clinadrops. But removal of the teeth is the best method to use for this disease.

Morris completely overcame FeLV and lived to the ripe old age of 17!

There is no cure for FeLV, although veterinarians can treat or at least alleviate the opportunistic infections associated with the virus. Good supportive care can also 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.” Cats diagnosed with FIV may live long, healthy lives, never showing symptoms

Adam and FIV

In 1992, Adam, a feral cat I trapped as a kitten in July 1990, escaped from my house one night. He came back the next night, bleeding from deep bite wounds to his neck. The emergency veterinarian, who treated Adam, said the wounds were probably caused by the canine teeth of another cat.

A few months later, Adam developed a high fever and a severe upper respiratory infection. Both were difficult to treat and my veterinarian suggested retesting Adam. We found that he had contracted FIV.

This wonderful, very good-natured cat recovered from the initial infection and eventually ended up weighing 14 pounds. He went on to live a happy and healthy life until June 2004. His death was not related to the FIV infection.

Adam had been living with my other rescued stray and feral cats for some time before he was diagnosed, he continued to live with them afterwards. He was very friendly and never fought, therefore I didn't separate him from the others. I randomly retested nine of my other cats a few years later, and they all tested negative for BOTH FeLV and FIV.



Louise Holton

Adam, an FIV+ feral who lived to the age of 14.

of the virus, though some cats may experience “recurrent illness interspersed with periods of relative health” (Cornell, “Feline Immunodeficiency Virus,” 2014). FIV suppresses the cat’s immune system, compromising her ability to fight off infection.

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 may occur. FIV positive cats are also much more susceptible to various

kinds of cancer and blood diseases, and some experience seizures, or behavioral and neurological disorders (Cornell, “Feline Immunodeficiency Virus,” 2014).

Fortunately, FIV is not transmitted as easily as FeLV. 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, so it is possible to keep an FIV-infected cat in the same household as a healthy cat with little risk of transmission, provided the cats tolerate each other and do

not fight. There is not a 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 (Cornell, “Feline Immunodeficiency Virus,” 2014).

A simple blood test can be performed in a veterinary office to determine if a cat has contracted FIV. However, 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, the test is probably 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 FeLV, veterinarians can treat or at least alleviate the infections associated with the virus. 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?

Each colony caretaker, shelter, and veterinarian must make their own decisions about how they wish to spend their resources, and if and which tests to perform. Testing for viral diseases such as FeLV

and FIV in feral cat colonies should be optional and not mandatory. Funds for sterilization programs are usually limited, so resources may be better spent on sterilization and rabies vaccines rather than on testing. The time taken to collect blood and run tests, plus the cost of testing, may be better spent on sterilization if, as a nation, we are going to reduce the feral cat population. 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 relocated are tested.

As discussed above, the rate of transmission for FeLV, FIV, and FIP in feral cats is very low. FeLV is primarily spread from infected mother cats to their kittens, and FIV is mostly spread among fighting tomcats through deep bite wounds. Therefore, spaying and neutering will decrease these activities and the spread of these infections. Studies have shown that “FeLV and FIV may become extinct” in cat populations with “few aggressive interactions” (Levy and Crawford, 2004). There is no reliable test for FIP, which is mainly found in catteries and crowded shelters and is less likely in feral cat colonies. Also, mass screenings of healthy cats can result in large numbers of false positives. All cats testing positive should be retested to properly confirm diagnosis, which is usually not possible in the case of feral cats, due to limited resources.

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 and vaccination rather than testing.

Vaccination Protocols

Alley Cat Rescue realizes that there are numerous viewpoints concerning the topic of providing vaccinations to cats. Some people believe strongly in vaccines, some are against them or tend to provide only minimal vaccines to their cats, and others fall somewhere in between. The intention of this chapter is *not* to discuss those opinions here, but rather to provide guidance to rescuers and to those who are assisting feral cats, based on standard, accepted vaccination practices throughout the veterinary and TNR communities. Typically, feral cats receive vaccinations at the time of sterilization; however, cats can be re-trapped later to update any vaccines.

Please note: For those who are assisting outdoor cats by fostering, we highly recommend you vaccinate your indoor cats (if you do have indoor cats) prior to introducing any new cats. Even if the new cat will be isolated in a spare room or in a large cage, it is still important for your indoor cats to be vaccinated. Viruses can be transmitted through the air and through contact with improperly cleaned food and water dishes, bedding

materials, your clothing, and improperly washed hands. It is much safer to take this precaution prior to bringing a new cat into the house, rather than trying to fight off an illness in multiple cats later.

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 on “Zoonotic Diseases” for more information.) 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, over a three-year rabies vaccine. It is highly recommended that the cat receive a three-year rabies vaccine despite being seen for the first time. This helps minimize the number of times you will have to trap the cat; however, it is not necessary and a one-year vaccine is sufficient. Kittens can receive a rabies vaccine as early as 12 weeks of age.

Along with a rabies vaccine, all feral cats should receive a distemper vaccine. Distemper or feline panleukopenia virus is highly contagious and can cause high mortality in a group of feral cats, usually among kittens, who have weakened immune systems. The virus primarily attacks the gastrointestinal tract, resulting in profuse and usually bloody diarrhea, severe dehydration, malnutrition, anemia, and often death. The virus compromises the immune system by decreasing the cat's white blood cells. The distemper vaccine or FVRCP is a combination

vaccine that also includes protection against rhinotracheitis, calici, and *Chlamydia psittaci*. Adult cats receive one distemper vaccine, while kittens require a series of booster vaccines spaced apart at three-week intervals in order for the vaccine to fully protect the kitten against the virus. Kittens can receive their initial distemper vaccine as early as six to seven weeks of age.

Rabies and distemper vaccines are the two main vaccinations feral cats should receive. However, we also recommend they receive a feline leukemia (FeLV) vaccine, even if you decide not to test the cat for the disease. FeLV is a retrovirus that compromises the cat's immune system, making her susceptible to other diseases. Despite the low percentage of feral cats living with feline leukemia and the low rate of transmitting the disease, we suggest feral cats also be vaccinated against the virus as a precaution. ACR's veterinarians administer a distemper vaccine that includes the FeLV vaccine; using this combination vaccine saves money in the long run over administering separate distemper and FeLV vaccines.

Please note: Several studies have found a strong association between "the administration of feline vaccines (e.g. rabies and feline leukemia virus) and subsequent development of soft tissue sarcoma at the site of vaccination" (Pet Cancer Center, 2013). Soft tissue sarcoma developed, over the range of four weeks to 10 years, at the site of vaccine administration in an estimated 0.001 to 0.0001

percent of cats. Many of these cats with vaccine-associated sarcoma, 60 percent, had highly aggressive tumors, while only six percent had mildly aggressive tumors, according to one study (Pet Cancer Center, 2013).

The risk of vaccine-induced sarcoma, a highly malignant cancer, has caused the veterinary community to look into the possibility that cats have been over-vaccinated. In 1996, the Vaccine-Associated Feline Sarcoma Task Force (VAFSTF) formed to investigate how to prevent these sarcomas. The panel made new vaccination recommendations, 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 also found that the three-year rabies vaccination provides adequate immunity, and suggested this over the annual shots to lessen the risk of sarcomas forming (American Veterinary Medical Association, 2001).

ACR strongly recommends providing a three-year rabies vaccination to adequately protect adult feral cats for at least three years, and possibly even longer. In our experience, we have found that five- to seven-year-old feral cats, who are part of managed colonies, are easier to retrap, as opposed to retrapping the cats every year. The cats will know and trust the caretaker and can be more easily trapped. 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 caretaker has the space and is capable of housing the cat, she may spend a few days recovering confined to a cage.



Louise Holton

ACR colony cat, Stumpy. She was fostered for a few extra days post-surgery.

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, so depending on which brand your veterinarian uses, each cat may only need to receive one (monthly) application in order to treat both internal and external 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, such as Convenia, can be administered or daily antibiotics, such as Clavamox or Amoxicillin, can be added to wet food for treatment. For cats who can be handled, antibiotic eye ointments can also be administered. (Refer to the chapter on “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 started eating again and 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, we have found the best treatment for this is to remove all unhealthy teeth and treat flare-up conditions with antibiotics.

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 also an appropriate one to consider for aging and terminally ill feral cats. Some feral cats, in their old age, have come to trust their caretakers, and it may be possible to trap the cat and provide in-home hospice care. However, this should not be taken lightly and all caution should be used. Even though the cat is elderly,

she is still feral and should be confined to a large cage. ACR has considered both hospice care and trap-and-euthanize for terminally ill cats in our colonies. 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 feel this to be a sensible and humane approach to assisting terminally ill colony cats.

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 in mourning when their beloved alley cats eventually die. 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 euthaniz-

ing 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 extreme cases of injury or illness that exceed medical capabilities, the cat should also be euthanized. Euthanasia should only be practiced when all other options have been exhausted.

Conclusion

Please 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. 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.