



ALLEY CAT RESCUE

AN ALLIANCE FOR CAT PROTECTION

P.O. BOX 96449 WASHINGTON DC 20007 • 301 277 5595 • ACR@SAVEACAT.ORG

Feline Viral Diseases: FIP, FeLV, FIV

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. The occurrence of FeLV and FIV and the rate of transmission of these diseases in housecats and feral cat colonies is very low. 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).

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—5 to 10%—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).

There are two forms of the virus. In the wet form, cats will have an accumulation of fluid in the abdominal cavity, the chest cavity or both. In addition to the symptoms for both forms, cats with the wet form can show labored breathing and abdominal distension. In the dry 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.

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).

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. Cat owners should speak with their vets to see if the vaccine is the right option for their cat.

Foster parents and cat guardians with multiple cats should efficiently clean their homes to reduce the chance of infection to others. Litter boxes, bowls, and scratching posts should be cleaned with hot soap and water and then rinsed with a 1:32 dilution of bleach with water. The house should be thoroughly vacuumed as well. Objects such as blankets and cat beds should be thrown away.

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. 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 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 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.

Resources

Levy, Julie K., and P. Cynda Crawford. "Humane Strategies for Controlling Feral Cat Populations." *Journal of the American Veterinary Medical Association* 225.9 (2004): 1354–60. *Avmajournals.avma.org* (Atypon). Web. 18 Aug. 2014.

Cornell Feline Health Center. "Feline Infectious Peritonitis." Ithaca, New York: Cornell University College of Veterinary Medicine, 2014. Web. 29 Sept. 2014.

Cornell Feline Health Center. "Feline Leukemia Virus." Ithaca, New York: Cornell University College of Veterinary Medicine, 2014. Web. 29 Sept. 2014.

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