

# Feline Immunodeficiency Virus Infection

## ABOUT THE DIAGNOSIS

Feline immunodeficiency virus (FIV) is an irreversible viral infection that can affect cats. It has been found in cats throughout the world. Although FIV is similar to human immunodeficiency virus (HIV) that causes AIDS in people, FIV cannot be transmitted to people, and cats cannot carry HIV. However, cats with FIV may have immune deficiencies that eventually make the cats vulnerable to the same secondary diseases that people with depressed immune systems can acquire (for example, chronic diarrhea or respiratory or skin problems that people with HIV/AIDS or individuals undergoing chemotherapy treatments can have). A retrovirus like FIV is an organism that survives by invading the animal's healthy cells and "taking control" of the mechanism that the cells use to replicate. In this way, the virus guarantees that it will be present in future generations of the cells throughout the body.

FIV is spread from cat to cat, primarily through bite wounds from infected cats. Unneutered, adult male cats that roam outside are most commonly infected with this virus; however, any cat can acquire this disease. The disease is also rarely transmitted from an infected mother cat to her nursing kitten in the milk. Sexual transmission is very uncommon, in contrast to HIV.

The FIV virus can cause damage in two ways. It can weaken a cat's immune system (immunosuppression) and make the cat susceptible to other infectious organisms such as bacteria, other viruses, yeast, fungi, etc. (secondary or "opportunistic" infections). A virus can also directly destroy healthy cells so that they no longer function properly. Initially, for a few weeks after infection as the virus is spreading through the body, a cat may have a low-grade fever, enlarged lymph nodes, or other vague signs of illness that may never be detected. After this period, the virus generally goes into a latent stage during which time the cat can appear healthy; however, the virus continues to work in the two ways described above during this latent period. This latent stage can last for many years before the cat shows any outward signs of illness (clinical signs or symptoms). Symptoms, if they eventually occur, may include skin and ear infections, diarrhea, anemia (a decreased number of red blood cells), redness and inflammation of the gums causing decreased appetite and/or tooth loss, respiratory problems including pneumonia, abnormal urination, abnormal behavior such as roaming and confusion or dementia, and certain types of cancer. These symptoms depend upon which cells the virus "chose" to infect, and are often nonspecific. That is, these kinds of symptoms are vague, and may be caused instead by any of a number of disorders that are completely unrelated to FIV. The presence of such symptoms, particularly in cats that roam or have been strays in the past (and therefore may have been exposed through bites from other cats) leads a veterinarian to want to test a cat for FIV, to confirm or eliminate FIV as a cause of the symptoms.

A blood test (ELISA test) is commonly performed to detect this disease. The test involves placing a small sample of your cat's blood on an FIV test cartridge and having results in a few minutes. It is a good screening test, although no test is 100% reliable. For example, previous vaccination for FIV will make the result of the test positive even in the absence of actual FIV infection. There are many factors that must be considered when interpreting test results, and if any discrepancy arises, your veterinarian may choose to repeat the test at a later date and/or send a blood sample to a laboratory where another test may be done to help confirm a diagnosis.

## LIVING WITH THE DIAGNOSIS

Cats that have FIV must be kept indoors and isolated from other cats. Isolation is important to prevent a cat from transmitting FIV to other cats and to prevent the infected cat (with a weakened immune system) from contracting diseases from other cats in the neighborhood. FIV-positive cats should be neutered to decrease the tendency to roam and fight. Proper nutrition is extremely important to help an affected cat remain as healthy as possible.

The latent period may last for many years in FIV-positive cats, and a positive test result in a cat that is otherwise feeling well does not imply suffering of any kind or any other immediate health problem. During this time, a cat usually is otherwise healthy and entirely comfortable and happy. Other cats should not be brought into the household and exposed to this cat (to prevent spreading of FIV), especially if the FIV-positive cat is resentful or aggressive toward other cat(s).

## TREATMENT

**PET:** There is no medication designed specifically to treat cats with FIV. However, some cats have been treated with *antiviral* drugs designed for humans. Success has been limited using these medications. Another type of medication, *immune stimulants*, has been used for helping to strengthen the animal's own immune system. Success has also been variable using this type of medication. Treatment may involve weeks of injections and/or giving the medication by mouth. Be sure to check with your veterinarian if using these medications, as the same medication may be prescribed for administration by mouth or by injection, but with a very different dosage depending on the route of administration. Secondary and/or opportunistic infections must also be treated if they arise. No medication can completely eliminate the virus from a cat's body.

**ENVIRONMENT:** FIV is spread most commonly through bite wounds and not through casual contact. If the virus exists on objects such as food or water bowls and litter boxes, it is easily destroyed using common household disinfectants such as diluted bleach (1 part bleach to 30 parts water).

## DOs

- Know the FIV status of all cats in your household.
- Isolate FIV-positive cats from all other cats in the household.
- Keep FIV-positive cats strictly indoors.
- Have FIV-positive cats neutered.
- Set up a schedule of regular visits to your veterinarian so that subtle changes in your cat's health can be detected and a treatment plan can be discussed.
- Realize that the main reason for identifying FIV is to know if a risk of contagion to other cats exists, and to investigate persistent symptoms (intestinal, dermatologic, respiratory, neurologic) that could be caused by FIV-related opportunistic infections.
- Give medications exactly as directed.

## DON'Ts

- Do not assume that having FIV is a "death sentence" for a cat. Quite the opposite, most cats with FIV show no symptoms, feel well, and continue to do so for years (a normal lifespan with a good quality of life is possible).

- Do not introduce cats with an FIV-positive status to cats currently in your household.
  - Do not allow FIV-positive cats to roam outdoors or to come in contact with any other cats.
  - Do not allow kittens to nurse from FIV-positive mother cats.
  - Do not assume that a cat vaccinated against FIV cannot contract this disease; no vaccine can provide 100% protection.
- If your cat shows any signs of illness, including weakness, lethargy, vomiting, diarrhea, decreased appetite, weight loss, skin and/or ear problems, abnormal urination, or any abnormal behavior.

### **WHEN TO CALL YOUR VETERINARIAN**

- If your cat has been bitten by a cat with an unknown FIV status. An initial exam is essential, and a follow-up FIV test is warranted 2 to 3 months later (the time it takes for the body to provide the first clue of harboring the virus).
- If you have any questions concerning the drug that you are giving your cat.
- If you cannot keep a scheduled appointment.

### **SIGNS TO WATCH FOR**

As signs suggesting that an FIV-positive cat may be developing signs of an opportunistic infection:

