

## Feline Immunodeficiency Virus (FIV)

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### What is FIV?

FIV stands for feline immunodeficiency virus just as HIV stands for human immunodeficiency virus. In fact, these two viruses are closely related and much of the general information that has become common knowledge for HIV also holds true for FIV. FIV is a virus that causes AIDS in cats; however, there is a long asymptomatic period before AIDS occurs and our job is to prolong this asymptomatic period.

Life expectancy of the FIV+ cat is variable. Approximately 18% die within 5 years of infection. An additional 18 percent are still alive in that time frame but are experiencing illness from their immune-suppressed state. The remaining cats appear normal in that time frame and many go on to live long lives, only periodically experiencing illness.

For a lengthy description of this virus, we recommend the [Cornell Feline Health Center](#).

Also helpful is information from the [American Association of Feline Practitioners](#).

### How is Diagnosis Made?

Most of the time FIV infection is discovered using a screening test performed in your vet's office or on a blood panel run at your veterinarian's reference laboratory. Once a cat has been identified as positive by a screening test, a follow-up confirming test called a Western Blot test is the next step. Once this test is positive, the cat is considered to be truly infected.

In a household with multiple cats, it is important to test all the cats when one cat comes up FIV+ as it is important to know who is infected and who is not. Cats that test negative should be tested annually as they are at higher risk for infection even though, it is generally considered unnecessary to isolate the negative and positive cats from each other. Knowing a cat's status tells you which cats need to follow the guidelines listed in this page.

It should be noted that giving the FIV vaccine will cause a cat to test positive on both of the above tests. PCR testing is generally not used for screening but is able to detect viral DNA. It can be used to distinguish an FIV-infected cat from an FIV-vaccinated cat. The FIV vaccine has



Photo by Dr. Teri Ann Oursler

been withdrawn from the U.S. and Canadian markets, not for safety reasons but because it has never been widely embraced by the veterinary profession due to the testing ambiguity situation.

### How did my Cat get Infected?

The major route of virus transmission is by the deep bite wounds that occur during fighting. There are other means of spreading the virus but they are less common. Mother cats cannot readily infect their kittens (except in the initial stages of infection). FIV can be transmitted sexually and via improperly screened blood transfusions. Casual contact such as sharing food bowls, or snuggling is very unlikely to be associated with transmission.

**Isolation of an FIV+ cat is not necessary in a stable household unless the FIV+ cat is likely to fight with the other residents. That said, it is important not to introduce any new cats as this is likely to lead to fighting and consequent virus transmission.**

### What do I do Now?

Some lifestyle changes will probably be needed now that you know you have an FIV+ cat.



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#### *Keep your Cat Indoors Only*

Now that you know your cat has an infectious disease, the responsible thing is to prevent the spread of this disease in your community. This means that your cat will need to be an indoor cat and not just for the good of the community but also to minimize his exposure to infectious diseases. Cats who are used to living outdoors will make a fuss about being allowed outside. It is crucial that you do not give in as this will simply reinforce the crying and fussing. If you just allow the fussing to run its course, it will cease and the cat will get used to the new indoor only life.

Cats who are inclined to slip past people entering the home when the door is open can be managed by leaving them in a closed room when someone is out of the house. This way, when someone arrives home, the cat does not have access to the front door.

#### *No Raw Foods*

There are currently numerous fad diets involving raw foods for pets. It is crucial that one not succumb to these popular recommendations when it comes to the FIV+ cat. Uncooked foods, meats especially, can include parasites and pathogens that a cat with a normal immune system might be able to handle but an FIV+ cat might not. Stick to the major reputable cat food brands.

#### *Vaccination*

There is some controversy in regard to what is best for vaccinating an FIV+ cat. Unlike the FeLV+ cat, who probably requires more frequent vaccination than the average cat in order to get a decent immune response, there is some evidence that vaccinating the FIV+ cat may encourage the virus to activate. This evidence involves cultured lymphocytes in test tubes, however, not actual infected cats. If you live in an area where vaccination is legally required, then you should continue to vaccinate your cat normally. Similarly, if your cat goes outdoors despite the above recommendation, then you should continue to vaccinate your cat

normally. If your cat is indoors only and no other cats in the home go outside, then it is reasonable to forgo vaccination unless they come to be required for boarding or for elective veterinary procedures.

### ***Parasite Control***

The last thing an FIV+ cat needs is fleas, worms or mites, especially now that he is going to be an indoor cat. There are numerous effective [products](#) on the market for parasite control. Consult with your vet about which parasites you should be especially concerned with and which product is right for you.

### ***Immune Stimulating Agents***

There is an assortment of products on the market claiming to stimulate the immune system. Most of these do not have adequate science behind them to justify recommendation. There are a couple worth mentioning.

[Interferon alpha](#) is absorbed by the lymph tissue of the mouth and throat and appears to minimize some of the opportunistic infections associated with FIV and improved body condition and survival time has been associated with its use though these improvements are mild. Interferon alpha is used in an extremely dilute form (not the much higher anti-viral doses) and is used as a salty liquid added to the cat's food or administered orally on a daily basis. In the past, the extreme dilution made it reasonably priced but lately commercial availability has been a problem and a compounding pharmacy is likely to be the only source.

LTCl made by TCyte® is an injectable immunomodulator. It was originally produced as a product for FIV + cats and can still be obtained for this use but, more recently, TCyte has gained FDA approval for their product for dogs with arthritis and have shifted their marketing efforts to this objective. The original information for cats can be obtained by contacting the company.

### ***Antioxidants***

Oxidative stress is rather a long story and has been implicated in development of cancer, age-related degeneration, and other disease states. In short, oxidative stress stems from reactive oxygen compounds that are generated by our metabolism. The oxygen compounds are able to damage DNA unless they are "scavenged" (rendered harmless) by either the natural antioxidant systems of our bodies or by antioxidant supplements we take orally. Oxidative stress has been implicated in the progression of HIV infection in humans and it has been extrapolated that the same is true of FIV infection in cats. A 2008 study by Webb et al published in the Journal of Feline Medicine and Surgery looked at an antioxidant called Superoxide Dismutase in FIV cats and found an improvement in the CD4+ to CD8+ ratio in supplemented cats. This is a promising finding, though cats were only followed for a 30-day period and indicates that further studies may show more substantial clinical benefit. What this all means is that oral antioxidant supplementation may be helpful in keeping FIV+ cats healthy. While the jury is still out as to how significant a treatment this is likely to become, it is certainly clear that antioxidant supplementation may be beneficial on a number of planes and may be worth a try.

### ***General Monitoring***

While a non-geriatric FIV- cat should have an annual examination, the FIV+ cat should have a check-up twice a year. Annually, a full blood panel and urinalysis is wise. Also, it is important to be vigilant of any changes in the FIV+ cat. Small changes that one might not think

would be significant in an FIV- cat should probably be thoroughly explored in an FIV+ cat. Any weight loss in particular should be addressed.

Keeping your cat indoors is the most significant step in disease prevention that you can do. The feline immunodeficiency virus is not transmissible to humans in any way.

#### What about Medications Used in HIV+ Humans?

AZT (brand name Retrovir®) is a prominent antiviral medication for the treatment of human HIV infection. Tests in FIV+ cats indicate that those with either neurologic signs or with stomatitis (oral inflammation) may benefit most. At this time at least (in cats), AZT seems to be something to save for when symptoms of viral infection appear. There are some bone marrow issues with red blood production and some periodic monitoring tests are advisable. If problems arise, fortunately, they are reversible and should resolve with a few days of discontinuing medication.

Drugs other than AZT seem to have more potential for toxicity and are not recommended for feline use.

#### The Immune-Suppressed Owner

Immune-suppressed cats and immune-suppressed owners do not mix well. Those who are immune suppressed, be they human or non-human, are inclined to become infected with opportunistic organisms and in turn shed larger numbers of those organisms than one might naturally come into contact with in the environment. This means that someone who is immune-suppressed (human or not) can serve as an amplifier for infectious agents. An immune-suppressed cat can increase an immune-suppressed human's exposure to infectious agents and vice versa. This is obviously not a good situation. The same is true for multiple immune-suppressed cats living together. If possible, there should be only one immune-suppressed individual per home.

Read more material for HIV+ individuals concerned about [pet to human disease transmission](#).



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