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Cat Tips

Kills Your Pet's White Blood Cells, Leaving Her a Sitting Duck for Deadly Virus

It's highly contagious, life-threatening and found nearly everywhere. It pummels their protective white blood cells, especially in these groups of pets. Yet vet experts reveal two ways to avoid the tragedy, and they're simpler than you think.

Reviewed by Dr. Becker

STORY AT-A-GLANCE

- The feline panleukopenia virus (FPV) is highly contagious and life-threatening; prevention involves either well-timed vaccination or homeopathic nosodes
- Severe disease caused by FPV is seen primarily in very young kittens, pregnant and immunocompromised cats and those living in stressful shelter or rescue situations
- Symptoms of FPV are similar to those seen in canine parvovirus, and include vomiting, diarrhea, profound dehydration and high fever
- Cats who survive an FPV infection will be in recovery for weeks or even months
- Home care for a kitty recovering from FPV requires a high level of supportive care and strict adherence to appropriate hygiene practices to prevent the spread of the disease to other cats

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Feline panleukopenia virus, often shortened to FPL or FPV, goes by several other names, including feline infectious enteritis, feline parvo and most commonly, feline distemper. The disease does not occur in dogs.

Despite its alternate names, the organism that causes feline panleukopenia is not related to the viruses that cause canine distemper or parvovirus.

However, just to confuse things a little bit further, feline panleukopenia is actually caused by a parvovirus and much of the information on the canine parvovirus can be applied to FPV.

The feline panleukopenia virus is ubiquitous, meaning it’s everywhere — it is extremely stable in the environment.

The organism can live for years in contaminated environments, and can survive freezing temperatures as well as treatment with common disinfectants such as alcohol and iodine. A mixture of 1 part bleach to 32 parts water does kill it, thankfully.

Cats at Highest Risk for FPV, and Routes of Infection

FPV is highly contagious and life-threatening. The virus attacks rapidly dividing cells in the cat's body — especially those found in the GI tract, bone marrow and the stem cells of kittens in the womb.

Because the virus affects blood cells, FPV can lead to anemia. It can also make the body more susceptible to other viral and bacterial infections.

Severe disease caused by FPV is most commonly seen in kittens between 2 and 6 months of age, pregnant females and immunocompromised cats. Kitties living in groups, for example, barn cats, feral cats and those living in stressful shelter and rescue situations are at highest risk of outbreaks of the disease.

In healthy adult cats, FPV is usually mild and can even go unnoticed or undetected because kitties don't show any symptoms. Cats who survive the infection are immune to further infection with the virus. Panleukopenia can also infect wild cats, as well as minks, raccoons and ferrets.

The virus is shed in bodily secretions of infected animals for up to six months following exposure. Cats can become infected through direct exposure to infected poop, saliva or viral particles left behind on food and water dishes, towels, bedding or surfaces around the home or shelter.

FPV can be transmitted in utero from an infected mother cat to her kittens, as well as to newborn kittens through grooming.

Symptoms of Infection

The feline panleukopenia virus enters through a kitty's mouth or nose. The lymph nodes in the throat are affected first, and then over the next two to seven days, the virus moves quickly to the bone marrow and intestine.

In the bone marrow, the virus suppresses production of all white blood cells ("panleukopenia" means "all white shortage"), which are the immune cells needed to fight the infection. Without white blood cells, the cat's body can't stop the progression of the virus.

In the intestine, the virus causes ulcers that lead to diarrhea, life-threatening dehydration and overwhelming secondary bacterial infections. Death is usually caused by either dehydration or a bacterial infection that spreads from the gut to a kitty's systemic circulation.

In infected cats, FPV causes symptoms similar to those seen in canine parvovirus, including:

- Vomiting
- High fever
- Diarrhea (sometimes bloody)
- Anemia
- Profound dehydration
- Depression
- Refusal to eat

- Hiding
- Significant weight loss
- Neurologic signs if the virus attacks the brain

Diagnosing FPV

Your veterinarian will take a complete history, including your cat's general health and whether he may have recently come in contact with other cats or spends time outside.

Since feline panleukopenia has symptoms similar to those seen in several other conditions, including poisonings, feline leukemia (FeLV) and feline immunodeficiency virus (FIV) and pancreatitis, it will be important for your veterinarian to rule those things out first.

Routine laboratory tests will include a complete blood count (CBC), a biochemistry panel and urinalysis. In cats with FPV, bloodwork will typically show a dramatic decrease in white blood cells, and a low red blood cell count as well, indicating anemia. A fecal sample may also be taken to check for viral shedding.

Specific tests for FPV include immunofluorescent antibody testing, the polymerase chain reaction test and virus isolation — however, they aren't commonly used. Generally speaking, kittens with severe gastrointestinal symptoms, together with an extremely low white blood cell count and anemia, are considered probably infected with the panleukopenia virus.

Treatment Options

Unfortunately, there are no antiviral protocols specific for FPV, so the only way a cat can survive is if she can be kept alive until her immune system is able to throw off the infection. At a minimum, this requires aggressive IV fluid therapy to prevent dehydration, and control of opportunistic intestinal bacteria.

Depending on the kitty's symptoms, other medications may be required, including expectorants to help manage bronchitis or pneumonia, anti-emetics to help control nausea and vomiting and whole blood transfusions for a dangerously anemic patient. Sometimes nutritional support is required as well because the cat isn't eating, and often pain management is necessary.

Obviously, a kitty with FPV must be hospitalized during this critical period, and remain isolated from other cats. Integrative veterinarians may also use homeopathic nosodes, as well as microbiome restorative therapy during this time. Unfortunately, even with aggressive supportive therapy, FPV is almost always fatal in very young or immunocompromised kittens. Older cats with stronger immune systems have a much better prognosis, but even their chances of survival are not great.

Veterinary vaccine expert Dr. Ronald Schultz believes two well-timed panleukopenia vaccines given to kittens is the best way to protect most cats from the disease. Dr. Richard Pitcairn advocates the use of FPV nosodes instead.

Home Care

For cats lucky enough to survive FPV, the good news is they'll never catch it again, but it can take weeks or even months to fully recover.

Once an FPV kitty is able to go home, ongoing excellent supportive care will be necessary. Your cat will need plenty of rest in a quiet, warm area of your home, away from stressful situations and the hustle and bustle of daily life. Obviously, she'll need to be isolated from other cats until she's fully recovered.

It's important to pet and cuddle your cat, because this disease has a particularly depressing effect both physically and mentally, and your kitty will need attention and affection while she recovers. But with that said, you'll need to practice very strict hygiene while your cat is recovering from an FPV infection.

It's important to keep in mind that viral particles can remain around your home and on surfaces in the home for many months. Be sure you're cleaning especially well anything that comes in contact with your kitty and her belongings to avoid unintentionally spreading the virus to other cats in your home.

Anyone coming into your home should use every precaution to prevent spreading the disease, including removing shoes and clothing before and after handling your cat. It's also important to thoroughly disinfect hands and arms before coming in contact with noninfected animals.

Household bleach can be used as an effective disinfectant. However, the best way to ensure you've truly eradicated the virus from your home is to replace all your cat's belongings with new ones, including bedding, toys, dishes, towels and litterboxes, once she's recovered.