



WINN FELINE FOUNDATION

For the Health and Well-being of All Cats

637 Wyckoff Ave., Suite 336, Wyckoff, NJ 07481 • www.winnfelinefoundation.org

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Feline Panleukopenia

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Feline Panleukopenia Virus (FPV) is an infectious disease of cats found worldwide. The disease caused by FPV goes by many names, including Feline Distemper, Panleukopenia Disease, Feline Infectious Enteritis, and Feline Parvo. Once a common disease of cats, the incidence has been reduced dramatically by widespread vaccination. Panleukopenia is a treatable disease, however no specific therapy exists and prevention is a much more effective strategy.

FPV is a small virus in the parvovirus family (the same family that causes parvo in dogs). The virus is extremely widespread in nature, as it may effect domestic and wild cats (including large felids such as bobcats, lynx, and even lions and tigers), racoons, mink, and other wildlife. While feline panleukopenia does not infect dogs, some strains of canine parvovirus may infect cats and cause signs identical to Panleukopenia. The disease does not infect humans.

The FPV virus is extremely durable in the environment. In ideal conditions, it can survive for months to years while remaining infectious. Cats may be infected from contact with the feces or urine of infected cats, through nasal secretions, through fleas feeding on infected cats, or through contact with clothes, cages, toys, or other objects that have been contaminated with virus. Because of the hardiness of the virus, even apparently clean items may harbour Panleukopenia. The environment should be cleaned with dilute bleach (1:32), accelerated peroxides, or other viracidal cleaners. Indoor cats are not protected as the virus may enter on owners clothes or shoes, though food or toys, or through other routes. Most infected cats are less than one year of age, though infection is possible in any unvaccinated cat.

The virus enters through the nose or mouth of an exposed cat and initially replicates in the tonsils and other oral tissue. In this phase of disease cats appear healthy and show no clinical signs. The virus then spreads to the bloodstream and enters the gut, bone marrow, and other organs. The time span from infection to development of clinical signs is generally 3-5 days. The virus infects rapidly dividing cells, especially those of the small intestine and White Blood Cells. This results in a severely decreased white cell count and significant intestinal damage.

Initial signs of disease include high fevers, reluctance to eat, and lethargy. Over the next few days this progresses to vomiting and sometimes diarrhea, which is often bloody. Some cats are severely infected and die in the initial stages of disease with little warning (usually young kittens). Other cats may experience mild or transient signs and require little to no therapy. Progressive fever, gastrointestinal signs, and lethargy is the most common form of disease in cats presented to most veterinary clinics. While many of the signs of disease are attributable to the virus itself, infected cats are very prone to secondary bacterial and viral infections due to the damage to the gut and low white blood cell counts.

If a cat is suspected of having Panleukopenia there are several tests that may be done. A CBC (complete blood count) is often used to determine the white blood cell count. Cats with an active infection generally have very few white cells, and lower counts are associated with a worse prognosis. Fecal antigen tests are often used in cats



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with suspected disease. Rapid in-house tests are commercially available for Canine Parvovirus, but work to detect FPV as well. These may be done in a hospital setting and are effective for quick screening. Virus shedding in the stool only occurs for a few days, and so antigen tests may be negative even in cats with active infection.

PCR testing is a more advanced diagnostic tool that is able to pick up small amounts of virus very effectively. However it is more expensive than some other test and usually needs to be sent away to a reference lab with a several day turnaround. As technology progresses and PCR testing becomes cheaper and faster it may be more commonly utilized.

Keep in mind that some cats who have been recently vaccinated (within a few days) may test falsely positive for FPV.

Treatment of Panleukopenia virus is largely supportive and consists of fluid and electrolyte support, maintaining blood sugar and nutrition, antibiotic therapy, antinauseants, and other supportive care as needed. There is no direct therapy for Panleukopenia, and the virus itself is usually self-limiting. (Some experimental therapies such as interferon and plasma transfusions have been used with limited repeatable success). Antibiotic therapy is focused on preventing sepsis and other secondary infections due to very low white blood cell levels, and not at treating the virus itself. Generally therapy lasts between a few days and a week, and often requires IV fluids, feeding tubes, and aggressive hospitalization. Early and aggressive nutritional support is essential to a good prognosis.

The prognosis for cats with FPV infections varies significantly based on the age, health, and nutrition status of the cat; the severity of the infection (some “strains” of FPV may cause more severe disease than others); and the aggressiveness of care. Survival rates have been reported between 40% and 90%.

Prevention of FPV is much more effective than therapy. Vaccination for Panleukopenia is widespread and is included in all core kitten vaccine series. Vaccination is extremely effective- cats who have received a full course of vaccinations are extremely unlikely to contract this disease. The vaccine for Panleukopenia is usually given monthly from 8-16 weeks for a minimum of three vaccinations; again at 1y of age, and then no more than every 3 years after this. Some cats in high- risk environments such as animal shelters may be vaccinated earlier in life. In order to protect kittens in the first few weeks of life, vaccination of the mother prior to the start of pregnancy is essential. Any cat that may be used for breeding should be up to date on vaccinations prior to conception for this reason. If kittens do not receive colostrum (the first milk, rich in antibodies) from the mother, or are born to an unvaccinated mother, injections of serum from a vaccinated cat under the skin may be considered to create “passive immunity”.

If a pregnant female cat is infected with Panleukopenia, or if kittens are infected in the first few weeks of life, the virus may cause damage to the brain. A specific type of cells in the cat’s cerebellum may be killed by the virus, preventing normal development of the brain areas responsible for fine-tuning motion and allowing normal coordination. This condition is known as Cerebellar Hypoplasia (CH). Cats with mild to moderate forms of CH may live fairly normal lives, though they do require special care and will be prone to self-injury. Severely affected



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cats may be unable to eat, drink, or exhibit normal behaviours and may die or be euthanized due to poor quality of life.

Cats that recover from Panleukopenia infection generally have no long lasting issues. They are very unlikely to be infected again due to the strong immunity induced by this virus. After recovery, cats should be thoroughly bathed to remove virus from their skin and fur, and kept isolated for several weeks to ensure they are no longer infectious.

While Panleukopenia is a very serious, very contagious, and life threatening disease to cats worldwide, it is also very preventable. Following proper vaccination guidelines is essential to limited the spread of this deadly disease.

For more information

American Veterinary Medical Association

<https://www.avma.org/public/petcare/pages/Feline-Panleukopenia.aspx>

Merck Veterinary Manual

<http://www.merckvetmanual.com/generalized-conditions/feline-panleukopenia/overview-of-feline-panleukopenia>

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