

# WHAT IS FELINE PANLEUKOPENIA?

Feline *panleukopenia* (FP) is a highly contagious viral disease of cats caused by the feline parvovirus. Kittens are most severely affected by the virus. Feline distemper should not be confused with canine distemper— although their names are similar, they are caused by different viruses. The virus does not infect people. In the past, feline *panleukopenia* (FP) was a leading cause of death in cats. Today, it is an uncommon disease, due in large part to the availability and use of very effective vaccines.

## WHICH CATS ARE SUSCEPTIBLE TO FP?

Because the FP virus is everywhere in the environment, virtually all kittens and cats are exposed to the virus at some point in their lives. While cats of any age may be infected with the feline parvovirus that causes FP, young kittens, sick cats, and unvaccinated cats are most susceptible. It is most commonly seen in cats 3-5 months of age; death from FP is more common at this age.

The virus has appeared in all parts of the United States and most countries of the world. Kennels, pet shops, animal shelters, unvaccinated feral cat colonies, and other areas where groups of cats are housed together appear to be the main reservoirs of FP. During the warm months, urban areas are likely to see outbreaks of FP because cats are more likely to come in contact with other cats.

## HOW DO CATS BECOME INFECTED?

Cats can shed the virus in their urine, stool, and nasal secretions; infection occurs when susceptible cats come in contact with these secretions, or even the fleas from infected cats. An infected cat tends to shed the virus for a relatively short period of time (1-2 days), but the virus can survive for up to a year in the environment, so cats may become infected without ever coming into direct contact

**The feline parvovirus infects and kills cells that are rapidly growing and dividing, such as those in the bone marrow, intestines, and the developing fetus.**

with an infected cat. Bedding, cages, food dishes, and the hands or clothing of people who handle the infected cat may harbor the virus and transmit it to other cats. It is, therefore, very important to isolate infected cats. Any materials used on or for infected cats should not be used or allowed to come in contact with other cats, and people handling infected cats should practice proper hygiene to prevent spreading the infection.

The virus that causes FP is difficult to destroy and resistant to many disinfectants. Ideally, unvaccinated cats should not be allowed into an area where an infected cat has been — even if the area has been disinfected.

## HOW IS FP DIAGNOSED?

The signs of FP can vary and may be similar to other illnesses such as *Salmonella* or *Campylobacter* infection, pancreatitis, feline immunodeficiency virus (FIV) infection, or feline leukemia virus (FeLV) infection. Infected cats may even show signs that resemble those seen when a cat has been poisoned or has swallowed a foreign object.

The FP virus causes damage to the cells that line the intestines. It also attacks the bone marrow and lymph nodes, resulting in shortages of all types of white blood cells (*panleukopenia*) and of red blood cells (anemia). The first visible signs an owner might notice include generalized depression, loss of appetite, high fever, lethargy, vomiting, severe diarrhea, nasal discharge, and dehydration. Sick cats may sit for long periods of time in front of their water bowls but not drink much water. In some cats, the fever will come and go during the illness and abruptly fall to lower-than-normal levels shortly before death. In young kittens, the virus can also damage the brain and the eyes.

Pregnant female cats that are infected with the virus and become ill (even if they do not appear seriously ill) may abort or give birth to kittens with severe damage to the cerebellum, a part of the brain that coordinates nerves, muscles and bones to produce body

movements. These kittens are born with a syndrome called feline cerebellar ataxia, and their movement is accompanied by severe tremors (shaking).

Feline *panleukopenia* may be suspected based on a history of exposure to an infected cat, lack of vaccination, and the visible signs of illness. When that history of exposure is combined with blood tests that show severely reduced levels of all white blood cell types, FP is likely the cause of the cat's illness. FP is confirmed when the feline parvovirus is found in the cat's stool, but the results might be falsely positive if the cat was vaccinated for FP within 5-12 days prior to the test.

## HOW IS FP TREATED?

The likelihood of recovery from FP for infected kittens less than eight weeks old is poor. Older cats have a greater chance of survival if adequate treatment is provided early. Since there are no medications capable of killing the virus, intensive care and treatment are critical to support the cat's health with medications and fluids until its own body and immune system can fight off the virus. Without such supportive care, up to 90% of cats with FP may die.

Treatment focuses on correcting dehydration, providing nutrients, and preventing secondary infection. Although antibiotics do not kill the virus, they are often necessary because infected cats are at a higher risk of bacterial infections because their immune systems are not fully functioning (due to the decreased white blood cells) and because bacteria from the damaged gut may enter the cat's bloodstream and cause infection.

If the cat survives for five days, its chances for recovery are greatly improved. Strict isolation from other cats is necessary to prevent spread of the virus. Other cats that may have been in contact with the infected cat, or in contact with objects or people who were in close contact with the sick cat, should be carefully monitored for any visible signs of illness. In most cases, once a cat recovers from FP, it will not infect other cats through direct contact, but some recovered cats can shed the virus in their stool and urine for up to 6 weeks.

## HOW CAN FP BE PREVENTED?

Cats that survive an infection develop immunity that likely protects them for the rest of their lives. Mild cases that go unnoticed will also produce immunity from future infection.

It is also possible for kittens to receive temporary immunity through the transfer of antibodies in the colostrum — the first milk produced by the mother. This is called “passive immunity,” and how long it protects the kittens from infection depends upon the levels of protective antibodies produced by the mother. It rarely lasts longer than 12 weeks.

Prevention is vital to your cat’s health. Today, there are vaccines that offer the best protection from feline parvovirus infection. Vaccination is equally important for strictly indoor cats as well as indoor/outdoor cats because the virus is everywhere in the environment. Most young kittens receive their first vaccination between six and eight weeks of age and follow-up vaccines are given until the kitten is around 16 weeks of age. Adult vaccination schedules vary with the age and health of the cat, as well as the risk of FP in the area. Consult your veterinarian for advice on an appropriate vaccination schedule for your cat(s).



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to your cat’s health.**

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