

# A Winn Foundation Health Article On ...

## Feline Immunodeficiency Virus

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Feline immunodeficiency virus (FIV) was first discovered in 1986 in a California cattery where some cats appeared to have an illness similar to AIDS (acquired immunodeficiency syndrome) in people. Since then, FIV has been discovered in every country that has tested cats for its presence. It appears likely that FIV has been present in cats for many years. The rate of infection varies from about 1% (in healthy cats) to as high as 14% (in ill cats) in Canada and the United States. FIV is often found in cats that are positive for the feline leukemia virus.

FIV belongs to the same family of viruses as HIV (human immunodeficiency virus) and immunodeficiency viruses in other species. This family of viruses (Lentiviruses) is known for being species-specific, for life-long infection, and for slowly progressive diseases. FIV is not transmissible from cats to people, and HIV is not transmissible to from people to cats.

FIV is known to be present in the blood, saliva and cerebrospinal fluid of infected cats. However, the virus is extremely fragile and does not survive outside the cat's body. Therefore, the main method of transmission of FIV from one cat to another is through a bite wound during a cat fight. The virus is only rarely spread through casual cat-to-cat contact. However, female cats infected with FIV during their pregnancy can pass the virus to their unborn kittens.

Male cats are twice as likely as female cats to be infected with FIV. This reflects the greater tendency of male cats (especially those not neutered) to roam and fight with other cats. Outdoor, free-roaming cats are more likely to contract FIV than indoor cats. The virus is least common where cats are kept indoors or in rural areas where the cat population density is low. In Japan, for example, where there are a

large number of free-roaming cats, the virus is three times more common than in the United States. The average age of infected cats is 3 to 5 years old.

When a cat becomes infected with FIV, there may be no clinical signs for many years. However, we know that 4 to 6 weeks after infection the white blood cell count declines and some cats will have swollen lymph nodes at this time. Also, some cats have a fever, anemia, or diarrhea at this early stage. FIV is toxic to a type of white blood cell, the T helper cell, which is critical to a healthy immune system. This virus slowly depresses the function of the cat's immune system, leading to chronic health problems and opportunistic infections. Many FIV-positive cats have chronic inflammatory conditions of the teeth and mouth. Other chronic problems, such as diarrhea, pneumonia, skin disease, sinus infections and some eye diseases as well as neurological problems have been seen in FIV-positive cats.

FIV is diagnosed by using a blood test that detects antibodies against the virus in the bloodstream of the cat. Veterinarians may test a cat for FIV if there are unexplained chronic symptoms of disease in a major body system. The American Association of Feline Practitioners recommends testing all cats being introduced into a household to prevent exposing any existing cats to the virus. Kittens under 6 months of age may carry antibodies to FIV acquired from their mother without having the virus itself. Therefore, any kitten under this age who tests positive should be retested when over 6 months old.

FIV-positive cats may live for many months or years. With good health care aimed at recognizing and treating FIV-associated problems early, these patients can enjoy good quality of life. All efforts should be taken to preserve their health by protecting them against other diseases and injury. This is best accomplished by requiring FIV-positive cats to live indoors; this also helps to prevent spread of the disease.

In 2002, the first vaccine against FIV (Fel-O-Vax FIV®, Fort Dodge) became available in the United States. This vaccine may prove helpful

to protect high-risk groups of cats. However, the vaccine introduces a testing dilemma. Current FIV antibody tests cannot distinguish between antibodies from vaccination and antibodies from disease. Newer testing methodologies are in development to devise tests based on the virus itself, so eventually it will may be possible to tell a vaccinated cat from an infected cat.