



What is feline panleukopenia?

- The feline panleukopenia virus (FPV) is a parvovirus that infects all felids as well as raccoons, mink and foxes.
- It can wipe out entire populations of susceptible cats.
- FPV may survive in the environment for several months and is resistant to most disinfectants.

Infection

- Sick cats shed FPV at high concentration in the faeces, and transmission occurs via the faecal-oral route.
- Indirect contact is the most common route of infection, and FPV can be carried by fomites (shoes, clothing), which means indoor cats are also at risk.
- Intrauterine virus transmission and infection of neonates can occur in offspring of unvaccinated queens.

Clinical signs

- FPV affects cats of all ages; kittens are most susceptible.
- Mortality rates are high, >90% in kittens.
- Depending on the infected cell types, disease signs include:
 - diarrhoea
 - lymphopenia, neutropenia, followed by thrombocytopenia and anaemia
 - transient immunosuppression (due to neutropenia and lymphopenia)
 - abortion
 - cerebellar ataxia (in kittens only).
- Death can occur so rapidly that no clinical signs are observed.

Diagnosis

- FPV antigen is detected in faeces using commercially available tests (e.g. latex agglutination tests).
- Specialised laboratories carry out PCR testing on whole blood or faeces. Attention: after vaccination with attenuated FPV, PCR results may be weakly positive.

- Antibody tests are not recommended, as they do not distinguish between infection- and vaccination-induced antibodies.

Disease management

- Supportive therapy and good nursing significantly decrease mortality rates.
- In cases of severe enteritis, parenteral administration of a broad-spectrum antibiotic against gram-negative and anaerobic bacteria is essential to prevent sepsis.
- Feline recombinant interferon omega is likely to improve clinical outcome.
- Suspected/confirmed cases should be kept in isolation.
- If used carefully, disinfectants containing sodium hypochlorite (bleach), peracetic acid, formaldehyde or sodium hydroxide are effective.
- Young kittens with an incomplete vaccination history, colostrum-deprived kittens, or unvaccinated cats can be protected for 2-4 weeks by subcutaneous injection of anti-FPV serum (hyperimmune immunoglobulin products or immune sera produced in the veterinary practice).



Image courtesy of Tadeusz Frymus, ABCD

- The mortality rate in kittens with panleukopenia is high.

Vaccination recommendations

- FPV is a core vaccine component: all cats - including indoor cats - should be protected against FPV.
- Generally, three doses – one at 8-9 weeks, a second at 12-13 weeks and the third at 16-20 weeks of age – should be administered to cats. The 16-20 weeks’ dose is of particular importance for kittens from environments with a high infection pressure or from queens with high antibody levels. In higher risk-situation, starting earlier than 8 weeks can be necessary, followed by vaccination doses at intervals of 3-4 weeks until week 16.
- The final dose of the primary vaccination course is given at 10-16 months of age.
- Revaccinations are recommended at intervals of three years, unless special conditions apply.
- Adult cats with an unknown vaccination history should receive a single injection followed by a revaccination one year later. Further revaccinations may be given at intervals of three years or more.
- Protection starts rapidly after injection of modified live vaccines.
- Modified live vaccines should not be used in kittens <4 weeks of age.



Image courtesy of Albert Lloret, ABCD

- Intensive care of a cat with panleukopenia.



Image courtesy of Diane Addie, ABCD

- Kitten showing signs of severe dehydration and vomiting.



Image courtesy of Albert Lloret, ABCD

- Haemorrhagic diarrhoea in a cat with panleukopenia.