

**VACCINATION & INFECTIOUS DISEASES**

Vaccination is a safe and effective way to keep cats safe from the potentially fatal threat of some infectious diseases.

Our pet cats live in much higher density than they did in the wild, which puts them at greater risk of sharing and transmitting fatal infectious diseases. Under the Animal Welfare Act, owners have a legal duty of care to ensure their cat’s welfare needs are met, including the need to be protected from pain, suffering, injury and disease.

Population control through neutering is very important alongside vaccination as an efficient and cost-effective way of controlling infectious disease.

**What are infectious diseases?**

There are some micro-organisms – known as pathogens – that can invade the body and cause disease. Whether infection occurs depends on the amount of pathogen present, its virulence or strength, along with the health and immunity of the cat. Vaccination is defence against infectious disease.

**How do cats naturally protect against infectious diseases?**

Bacteria and viruses are all around us, different natural defences include:

🐾physical defences – such as the skin, or natural reactions such as coughing or sneezing

🐾inflammation – a process which leads to increased blood flow and delivery of chemicals and cells to destroy pathogens. An inflammatory response is always ready, but it is not always effective and it is not specific to a particular pathogen

 🐾acquired specific immunity – this type of defence takes a few days to develop first time round. Should the cat survive and meet the same pathogen again, it can quickly recognise and destroy it.

**What is immunisation?**

Immunisation means the generation of a specific immune response. There are two ways this is achieved:

🐾passive immunisation – through transfer of antibodies from mother to kittens. When a mother is exposed to a particular pathogen before or during pregnancy, she develops lots of antibodies to it. These are passed on to her kittens in the first milk produced after birth – protecting them during their first few weeks. These antibodies only last for a few weeks before the protection wanes – the kittens will then need to develop their own immunity

🐾active immunisation – this occurs after a cat has first been exposed to a pathogen and causes the animal to respond with a specific immune response. Each time the pathogen is met again, the cat can make a quicker more effective response against it.

**How do vaccinations work?**

Vaccination works in a similar way to active immunisation, but it allows the cat to develop immunity without risking illness from natural exposure to a pathogen. When a cat is vaccinated, it is given a modified, safe version of a pathogen so that the animal develops an immune response. After vaccination, if the cat encounters the same pathogen the body recognises it and has a quicker and more effective response to the disease.

**What are the types of vaccine?**

Vaccines are either modified live or killed/ inactivated depending on how the micro-organism has been altered:

🐾modified live vaccines – infect animal cells and undergo replication to trigger an immune response. They have been modified so that although they are still living, they don’t cause disease

🐾killed or inactivated vaccines – these present a killed version of the micro-organism to the body. Because they are not live, they usually require addition of a substance that increases the response to the vaccine

**Feline parvovirus (FPV)** also known as feline panleukopenia virus and feline infectious enteritis. It causes severe disease in cats and especially kittens and is frequently fatal. Initial signs include vomiting, diarrhoea and a high temperature, which progresses to low temperature, watery diarrhoea with or without blood, dehydration or sudden death

🐾FPV can survive in the environment for months or years. Cats are at risk through contact with other cats or the environment. The virus can also be spread on an owner’s shoes from the ground outside, so even cats kept indoors are at risk. Disease in cats can also be caused by infection with canine parvovirus (CPV) shed by infected dogs

**Feline herpes virus (FHV)** is one of the causes of cat flu and is a very common virus, it often causes a severe and potentially life-threatening illness. Cats that survive may develop ulcers on the surface of the eyes and develop long-term painful eye conditions. Others may suffer from repeated infections of the nose and sinuses. Once a cat has been infected with FHV, the virus stays within the cat.

**Feline calicivirus (FCV)**  another common cause of cat flu, which has a number of different strains – each type has a different ability to cause disease, signs include sneezing, runny nose and eyes, high temperature and loss of appetite. In kittens it can cause lameness and a high temperature. In adults and kittens, sometimes the only sign is painful ulcers found on the tongue, roof of the mouth or the nose – leading to dehydration and anorexia. In some cases, FCV can cause severe outbreaks with high death rates.

**Feline leukaemia virus (FeLV)** is a virus that causes a fatal disease – it affects the immune system and can also cause other infections, anaemia or tumours. Signs include recurrent infections with respiratory disease, sore gums or digestive problems. Infected cats can also suffer from a fluctuating high temperature and enlarged lymph nodes. A high percentage of cats diagnosed with FeLV unfortunately pass away within three and a half years.

**Chlamydophila** is a bacterium that often causes painful conjunctivitis with discharge and redness of the eyes, but it can also be a cause of cat flu. Kittens are most commonly affected and is often seen in unvaccinated cats within multi-cat households, breeding establishments or catteries.

**Bordetella bronchiseptica** is a bacterium that causes flu-like signs such as sneezing, runny nose and eyes, high temperature and a cough. It may affect the chest, causing a serious infection and has a relatively high death rate in kittens where pneumonia may develop and sudden death can occur. The same bacteria coughs kennel cough in dogs. Those most at risk include unvaccinated cats in multi-cat households, breeding establishments or catteries and those sharing an environment with dogs

**What are combined vaccines?**

Combined vaccines contain more than one micro-organism to induce immunity against more than one disease. FPV, FHV and FCV vaccines are usually combined – commonly referred to as a ‘flu and enteritis’ vaccine. A combined vaccine may also have a FeLV component and/or a *Chlamydophila felis* component.

**What are core vaccines?**

Core vaccines are generally considered to be essential for all cats to protect them against a number of serious diseases – these include FPV, FHV and FCV.

**What are booster vaccinations?**

Regular booster vaccinations remind the immune system to react and work effectively against infection. If booster vaccinations are not given, the cat will become susceptible to infection because the immune system will gradually ‘forget’ the threat.

Some infectious diseases are spread through direct contact with other infected cats. If your cat has outdoor access and you live in an area with a high feline population, they may be at greater risk. Indoor cats may appear to be at less risk, but they are not getting natural exposure to bacteria and viruses which act as natural booster reminders to their immune system. If vaccinations are not kept up to date, immunity may wane and indoor cats will not have protection if they do become exposed.

**Vaccination risks**

A mild reaction following vaccination is normal. Your cat may lack energy, have a poor appetite and feel tenderness at the injection site for around 24-48 hours after vaccination. Other side effects can include: high temperature, vomiting and diarrhoea, lameness or flu-like signs. Often these reactions are due to an infection already in progress at the time of vaccination – the additional challenge of the vaccine on the immune system has allowed the infection to develop. Occasionally, a lump may occur at the site of injection and in very rare cases, cancers may develop in the same spot. Vaccination of pregnant animals is not generally recommended.

**Should cats be vaccinated?**

Vaccination has greatly reduced the outbreak of life-threatening infectious diseases within the cat population. However, if cats are not vaccinated, widespread outbreaks of disease may occur where there are alot of cats. Boarding catteries will usually need to have vaccines up to date.

Cats infected with feline immunodeficiency virus (FIV) have a disrupted immune system and may be at greater risk of developing infectious diseases. FIV positive cats can be vaccinated to offer some protection.

If a large number of cats continue to be vaccinated, there will be low levels of disease leading to ‘herd immunity.’ Reducing the chances of a cat coming into contact with an infected animal or its secretions, so that the spread of disease is slowed or stopped.