PET VACCINATION FAQS

PET OWNER

We've compiled some of the most frequently asked questions a pet owner may ask regarding vaccination. This document is designed to be shared throughout the veterinary team as a handy reference as to how to answer these questions.

What are pet vaccines?

Pet vaccines are authorised veterinary medicines. In companion animals they are also prescription only products which must be prescribed by a veterinary surgeon. They typically contain modified or inactivated versions of infectious agents and are formulated to stimulate a protective immune response without causing the infectious disease they are designed to protect against. Depending on the specific disease, the authorised product and technology applied, they may be given by injection, drops up the nose or even orally. Like all authorised pet medicines, they undergo rigorous development and are the subject to studies undertaken in line with regulatory requirements to demonstrate their quality, efficacy and safety before they can be approved, marketed and supplied for use.

How do pet vaccines work?

Pet vaccines work very similarly to how vaccines for humans work. Here's a simple breakdown:

- **Understanding the Immune System**
  Our pets have an immune system that helps them fight off diseases and infections. When they encounter germs (like viruses or bacteria), their body recognises these invaders and tries to defeat them.
- **What Vaccines Do**
  A vaccine is like a training course for the immune system. Instead of exposing animals to the actual disease, vaccines contain tiny, harmless pieces of the germ (like proteins or inactivated germs) that won't make them sick. This helps their immune system recognise the invader without actually having to fight off an illness.
- **Building Immunity**
  Once the vaccine is given, the pet's immune system responds by producing specific proteins called antibodies. These antibodies are like soldiers that remember how to fight that particular germ. If the pet ever comes into contact with the real disease in the future, their immune system will recognise it and know how to attack it more effectively.
- **Boosters**
  Pet vaccines require boosters, which are additional doses given after the initial vaccine. This is important because it helps maintain a strong level of immunity over time.
- **Protecting Your Pet and Others**
  Vaccinating pets not only protects them from serious diseases, but it also helps prevent the spread of these diseases to other animals and even people in some cases.

In summary, pet vaccines prepare and strengthen their immune systems so they can fight off specific illnesses effectively without actually making them sick. Regular vaccinations are an important part of keeping pets healthy and can save lives.

Why is it important to vaccinate my pet?

Infectious diseases represent important threats to the health and wellbeing of both our pets and humans. Without adequate immunity, these serious diseases, can lead to debilitating, chronic and fatal consequences in vulnerable pets. Some of the diseases we vaccinate dogs for are capable of transmission to humans. Dogs affected by leptospirosis excrete the bacteria in urine, presenting a disease transmission risk to humans in close contact. Similarly in those countries where rabies is endemic, most human cases are caused by a bite from an infected dog. Appropriate vaccination offers powerful protection against such risks.

How often should I get my pet vaccinated?

Most pet vaccines are made to protect against several diseases with just one shot, which is called a multivalent vaccine. After your pet has their initial primary course of vaccines, they usually need yearly booster shots to keep their protection strong throughout their life.

The timing for these booster shots can vary depending on the disease and the specific vaccine, but generally, they happen every 1 to 3 years after the first yearly booster.

For certain diseases, like leptospirosis and canine contagious cough (aka kennel cough), dogs need a vaccine every year because their immunity doesn't last very long.

For cats, some vaccines can be given every 3 years after the first annual booster, but to keep them safe from "cat flu" viruses, they need to be vaccinated every year. Rabbits also need yearly booster shots to protect against diseases like myxomatosis and rabbit haemorrhagic disease.

In short, the frequency of vaccinations depends on your pet and the specific diseases they are being vaccinated against, but regular check-ups with your vet will help keep your pet healthy!

What diseases does my pet need to be vaccinated against?

Vaccines for pets protect them from various serious diseases. It's important to vaccinate your pet based on the health risks they might face.

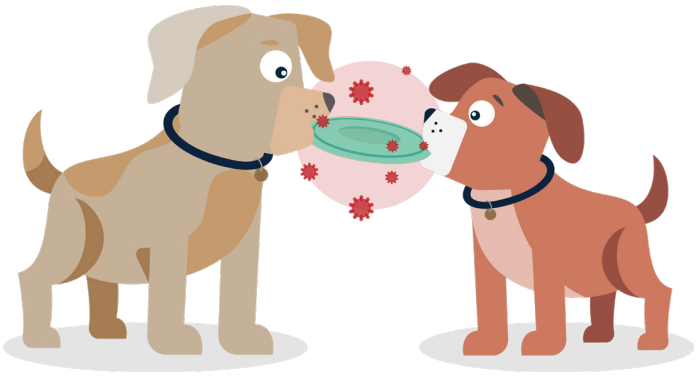
For dogs, vaccines protect against illnesses like distemper, infectious hepatitis, parvovirus, and leptospirosis. These diseases are significant threats to all dogs, no matter their lifestyle or where they live.

For cats, key vaccines help prevent "cat flu" caused by viruses like feline calicivirus and feline herpesvirus, as well as panleukopenia. It's also recommended to vaccinate kittens against the feline leukaemia virus, especially when they are young.

Some vaccines are recommended based on your pet's lifestyle. For example, if your dog frequently socialises with other dogs, they might need a vaccine for Contagious Canine Cough (aka kennel cough). Similarly, outdoor cats that meet other cats may be at risk for certain diseases, so vaccination against feline leukaemia virus would be a good idea for them.

For rabbits, it's recommended to vaccinate against myxomatosis and rabbit haemorrhagic disease, as these diseases are common and pose serious risks.

It's always best to consult with your vet to determine the right vaccines for your pet based on their individual needs and risks.



How common are the diseases that we vaccinate against?

The true frequency of many of the diseases we vaccinate against is hard to establish and can vary by region and other demographic factors, but all the vaccines given routinely protect against diseases still seen in the United Kingdom. The Small Animal Veterinary Surveillance Network (SAVSNET), based at the University of Liverpool, collates data from large veterinary laboratories that give some insight to the frequency and location of infectious disease. This data does not represent every case of infectious disease in the UK, as this is based on confirmatory tests performed in lab, and not every sample is sent only to these labs. There are a lot of tests performed within veterinary practices that is not captured in this data.

Regardless of these limitations in the case of canine distemper, infectious hepatitis and feline panleucopaenia clinical disease is only rarely identified in practices, whereas contagious cough in dogs and “cat flu” in cats both remain very common, and are regularly encountered in all veterinary practices. Whilst parvovirus and leptospirosis can be less frequently encountered by individual veterinary practices they both remain widespread risks. Thanks to continued vaccination feline leukaemia virus infects less than 1% of cats in the United Kingdom.

However it is fair to say that prevention is better than cure and vaccination plays an important part in keeping pets protected from these diseases.

Why is my practice recommending a leptospirosis vaccine that offers broader protection?

Leptospirosis is a serious bacterial disease of animals and humans that has a wide distribution across the world, including in the United Kingdom. In many parts of the world it is considered a re-emerging disease, with changes in climate and the environment driving increased risks. The disease varies from little or no symptoms, and can appear initially like a flu-like illness in man. Prompt treatment with appropriate antibiotics is essential, but given the range of signs and the complexity of lab testing cases can be missed.

However, the serious consequences in dogs can include acute kidney injury and failure amongst other serious consequences, and it is a life-threatening condition for domestic dogs and people. The leptospira bacteria have a spiral form that can move and penetrate moist mucous membranes such as the conjunctiva, inside the mouth and through ingestion. They also can enter the body via damaged skin. It survives well particularly in ponds, lakes, rivers and canals as well other damp environments such as ditches, marshland or areas of flooding.

Domestic livestock and wildlife, especially rodent species, can harbour and excrete the leptospire bacteria into the environment, oftentimes without showing obvious illness. Infection may be via ingestion, transfer across mucous membranes or across the skin e.g. via wounds, so that dogs that drink or swim in contaminated water, hunt or scavenge infected hosts can become infected.

In recent years, across both Europe and the UK, a wider variety of strains have been shown to be the cause of leptospirosis in dogs. Vaccination is the best way of reducing the risk from this disease, and, given the diversity of strains responsible, it is important that the vaccines include the strains responsible for disease as much as possible.

Why does need my pet need a yearly booster vaccination?

For some infectious diseases vaccination can offer long-term protection following primary vaccination for at least 3 years, whilst for others there is no evidence for protection longer than 12 months. The yearly vaccination advice is based on the minimum duration of immunity of the vaccines used, although some vaccine elements will only be administered every three years. Given that dogs and cats age more quickly than humans the annual visit to the practice also provides a valuable opportunity to review and advise on your pet’s health and wellbeing.

Can my pet have a blood (titre) test to show it is still protected instead of a booster?

If your pet is due for a yearly booster shot, a blood test can check if they still have enough antibodies from previous vaccinations to be considered immune. If they're still protected, they might not need a booster.

Pros

- The blood test measures antibodies, which can show how well the pet's immune system is responding to past vaccinations.

Cons and Limitations

- Cost
  Blood testing can be expensive, potentially more than just getting the booster shot.
- Snapshot Only
  The test only shows the current state of immunity, not how long it will last.
- Unclear Levels
  There isn't always a clear answer for what antibody levels mean in terms of protection for some diseases.
- Test Accuracy
  Blood tests done at a clinic might not be as accurate as those sent to a lab, leading to possible incorrect results (either suggesting your pet needs a booster when it doesn't or the opposite).
- Specific Cases
  For many diseases, measuring antibodies doesn't reliably indicate if a booster is needed. So, if one part of the vaccine shows low levels, your pet might still need the full vaccine dose.

Overall, blood tests can sometimes help, especially for dogs with special concerns (like health issues or past vaccine reactions), but they might not be the best option compared to getting regular booster shots. For cats, blood tests are not very useful.

In short, while it's possible to use blood tests to check immunity, boosters are still generally recommended to ensure that pets are fully protected.

How do you know vaccines are both safe and efficacious?

As veterinary vaccines are authorised veterinary medicines, a large number of studies are undertaken to demonstrate their quality, safety and efficacy when used as recommended. For live vaccines this includes a 10-fold overdose trial in the youngest and most vulnerable age group for which they are indicated, as well as clear demonstration that any live vaccines do not disseminate widely and cause disease in the body, and do not spread and revert to virulence in the pet population. Field trials involving larger numbers of animals often in a more typical veterinary practice setting will demonstrate efficacy and safety – and in dogs this may involve a wide range of breeds. The whole manufacturing process has defined quality checks throughout manufacture, before product release and indeed on retention batches so that any issues can be rapidly identified and remedied as quickly as possible.

Furthermore, companies have pharmacovigilance obligations so that they are obliged to record and report any notification of a side effect whether they are deemed to be triggered by recent product use or not. Such data is fed back to the regulator so that appropriate actions can be taken and advice can be rapidly updated.

How common are adverse events reported in relation to vaccination?

Overall vaccines provide a powerful benefit in terms of the disease protection they afford, however their use is based on a positive risk benefit versus risk assessment and, as with all medicines, reports of side effects can and do occur from time to time. Given that the vaccine's efficacy depends on the immune response, some transient local swelling at the injection site, or a short period of lethargy and malaise may be expected. Exact expectations may depend on the individual product labelling. Side effect or adverse event reports fall into one of a number of categories: suspected adverse reactions (SARs), suspected lack of expected efficacy (SLEEs), Human SARs (where a human has reported illness of injury), or environmental adverse event (where there is an impact to the environment or other in-contact animals).

Typically, the frequency of specific types of adverse event report is shown on the product label. Overall, the risk of an adverse event with Nobivac® vaccines could be described as rare <1 in 1,000 doses administered, whereas serious adverse events are reported very rarely: <1 in 10,000 doses administered or individual instances.

Why might a vaccine fail to work?

The ability of a vaccine to afford protection can depend on a variety of factors beyond the quality of the vaccine itself. In order to respond appropriately the animal needs to have a fully competent immune system. Factors such as ill health, poor nutrition, parasitism, age, and immune incompetence or compromise caused by drugs or genetic factors can all have an influence on this, and therefore it is important that vaccinated pets are judged as healthy as possible at the time of vaccination. Overall, the biggest influence on the ability of vaccines to protect is that seen in young animals, where high levels of maternal antibody passed on from the mother in colostrum can interfere with the ability of an individual to respond early in life. This is the key reason we start to vaccinate young animals at the time we do, and this is one reason additional vaccines may sometimes be offered in young animals.

What will happen if my pet has lapsed from its recommended vaccination course?

Whether a single vaccine or a full course of vaccines is recommended may depend on how long lapsed vaccination is as well as your veterinary practice's policy and the risk versus benefit assessment performed by your vet.

What is the risk from not vaccinating?

Whilst some of the diseases we protect against are rare and many practices will not diagnose them on a regular basis, others remain widespread. The younger an animal is the more vulnerable they may be, however older pets will also be susceptible if they contract some of the diseases.

Do I need different vaccines if I plan to travel with my pet?

Rabies vaccination is required for dogs, cats and ferrets that travel abroad to Europe. This should be conducted at a separate vaccine consultation to the annual booster vaccination. If you plan to travel abroad with your pet it is important to discuss this with your vet since there should also be further consideration and appropriate preventative steps taken for other parasite and disease risks.