

General Practice Service
Willows Information Sheets

Vaccination in dogs





Why vaccinate your dog?

Several serious infectious diseases of dogs can be prevented by vaccination.

Immunity (resistance) to disease develops either after exposure to natural disease or after being given a vaccine - a very weak or dead form of the infection. Allowing a dog to develop immunity by natural exposure to dangerous infections runs the risk of severe illness or death. We therefore advise vaccination of dogs against serious killer diseases. Over time this immune protection wears off, so booster vaccinations are necessary to ensure continuing protection.

Which diseases do we vaccinate against?

Parvovirus disease

Parvovirus disease is characterised by weakness and severe bloody vomiting and diarrhoea. Dogs, especially puppies, dehydrate quickly and die due to dehydration and, sometimes, severe blood loss. In puppies under the age of eight weeks the virus can also damage the heart muscle. Parvovirus can be caught directly from other infected dogs, but the virus can also survive for several months in the environment. It can therefore be picked up by a dog just sniffing in the park, for example. Illness usually develops within ten days of being infected.

Intensive treatment is frequently necessary for dogs with parvovirus infection. Unfortunately, even with intensive care, not all dogs can be saved.

Canine hepatitis

Clinical signs in mildly affected dogs include fever, poor appetite, a painful tummy and pale or jaundiced (yellow) gums. More severely affected dogs can develop bleeding and some patients are left with kidney damage. A characteristic sign during recovery is opacity of the cornea (the 'window' of the eye) - a condition known as 'blue eye'. Infected dogs shed the virus with all their body secretions, especially urine and faeces, and may continue to be infectious for some time, even after they have survived the disease. As the virus can live in the environment for several months, it can be picked up by a dog during a normal walk without necessarily meeting an infected animal.

With intensive therapy many dogs, but unfortunately not all, can survive hepatitis.

The virus causing canine hepatitis is different from the human virus, so people cannot become infected with this disease.

Distemper

Distemper virus can attack almost every organ, so affected dogs can develop a multitude of clinical signs ranging from fever, severe conjunctivitis, pneumonia, vomiting and diarrhoea, to meningitis and encephalitis (inflammation of the brain). Dogs that manage to survive acute distemper are often left with brain damage, leading to tics or seizures (fitting). They may also develop thickening of their paw pads and nose ('hard-pad disease') which can be painful. Infected puppies that survive the acute form often have teeth with damaged enamel which leads to early tooth decay. Infected dogs shed the virus with all their body fluids and can continue shedding virus for a long time after surviving the acute disease. Virus particles can also be transmitted through the air.

Intensive treatment is usually necessary for dogs with distemper and they may then survive the initial acute disease. However, further on-going treatment is often necessary to try to control the chronic signs of the disease (seizures or hard-pad disease), which unfortunately is difficult in most cases.

Leptospirosis

Leptospirosis is the only bacterial disease included in dogs' vaccine protocols. Several forms of the *Leptospira* bacterium exist, but all cause liver and kidney disease and often failure of these organs. This disease is a zoonosis, which means that humans can become infected too. In human medicine leptospirosis is known as 'Weil's disease' and there is no vaccination available for humans. Leptospirosis bacteria can survive for a long time in damp or wet surroundings (eg puddles or near rivers) and, as they are also transmitted by small mammals like mice or voles, dogs are potentially at risk on every walk. Many dogs can survive with intensive treatment, but may be left with liver or kidney damage. As infected dogs shed large amounts of *Leptospira* with their urine, owners are at risk of catching the disease from an infected pet.

Kennel cough

Kennel cough is actually not a single disease, but a group of diseases causing very similar clinical signs. Any cough that is transmitted easily to other dogs is called kennel cough. Several 'bugs', both bacterial and viral, can cause this problem. Kennel cough vaccine is not included in the routine vaccination protocol, but instead is only given on request, for example when dogs go into kennels or attend shows. In many cases kennel cough is a mild disease, although the cough can last for several weeks. In some dogs, however, especially those with pre-existing heart or lung problems or flat-nosed breeds, it can be more worrying and difficult to treat.

When should puppies be vaccinated?

Current advice from the vaccine manufacturers is that puppies need two vaccinations given 2 to 4 weeks apart. The first vaccination is usually given when the puppy is about 8 weeks old. Full protection should start about 7 to 10 days after the second vaccination has been given.

The timing of these vaccinations is a balance between, on the one hand, a desire to get the puppies vaccinated early, so that they can go out and socialise, and on the other hand, whether the vaccine will work properly (older puppies tend to get better immunity from the vaccine). In recent years the vaccinations have been brought earlier as an acknowledgement of the fact that behavioural problems caused by a lack of socialisation are a major cause of re-homing and even euthanasia of dogs.

How early the vaccinations can be performed is limited by the presence of maternal immunity. This is immunity that the puppy has gained from the antibodies transferred from its mother. This immunity starts to reduce at about 6 weeks of age, but it may still be protecting the puppy until it is 12 weeks old. Unfortunately, if this immunity is still protecting the puppy when we vaccinate it, the puppy's own immune system will not be stimulated (which is the

reason for vaccination). As a result, the puppy may not be able to mount an adequate immune response if it becomes infected with the actual disease, and this could cause the puppy to become seriously ill, despite having been vaccinated. Some veterinary associations are recommending much later vaccinations in order to ensure all puppies are fully protected. At Willows Veterinary Centre, in order to get our puppies socialised and still ensure adequate protection for all, we recommend that we do the initial course of two injections from 8 weeks of age with the second vaccination no earlier than 10 weeks old, followed by an additional parvovirus vaccination at 16 weeks of age.

Some breeders will vaccinate their puppies for parvovirus very early if they perceive they are at risk. These puppies will still need the full vaccine course, as outlined above.

Willows' vaccination recommendations for puppies

- Initial course of 2 injections 2 to 4 weeks apart
- The first vaccine no earlier than 8 weeks of age
- The second vaccine no earlier than 10 weeks of age

How often should a dog be vaccinated?

The basic answer is that a dog should be vaccinated again when the level of protection starts to wear off. This can be an individual time period for each dog and also depends on the type of vaccine used. Currently the vaccine manufacturers advise vaccinating against distemper, parvovirus and hepatitis in puppyhood (see above), then at one year of age and every three years thereafter. Leptospirosis and, if necessary, kennel cough, have to be vaccinated against yearly, as the protection does not last very long. This time period is set by manufacturers to ensure that the level of protection stays high.

Why is a health check necessary before vaccination?

The annual health check plays a vital role in the process of vaccination. Because successful vaccination is only possible when the body is able to build up a sufficiently strong immunity against the diseases, it is important that the dog is healthy at the time of vaccination and that the immune system is working properly and is not 'otherwise engaged'. The health check prior to vaccinating your dog makes sure this is the case. If we find cause for concern, we will not give the vaccine, but treat the problem we find or, if we cannot make a diagnosis through the clinical examination, we will advise further tests to find out what is going on. Only after we have sorted out the problem will we ask you to come again to have your dog vaccinated.

The annual health check itself is just as important as regular vaccination as this allows us to spot problems early and to give assistance with routine healthcare issues - after all, our patients cannot tell us if there is something bothering them!

Can something go wrong after vaccination?

Vaccination is a medical procedure and even though it looks easy, only people with qualification in veterinary medicine are allowed to vaccinate. Nonetheless, these days vaccination is a very safe procedure and problems are only rarely encountered. Unusual reactions of the immune system ('vaccine reactions') are only rarely reported and the risk of encountering one of the diseases is far greater than the risk of a reaction to the vaccine. Occasionally a small skin lump appears at the site of the vaccination, but this usually disappears within a few days. In very rare cases dogs are unable to produce a proper vaccine response even when they are healthy.

Should you be at all concerned before or after vaccination, please contact us.

Is regular vaccination still recommended?

We strongly recommend regular vaccination as unfortunately we still not infrequently treat dogs with the diseases mentioned above. The outcome of these infections can be very serious or fatal and can be avoided by regular vaccination.

If you have any queries regarding vaccination or if you would like to make an appointment to have your dog vaccinated, please do not hesitate to [contact us](#).

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