



There are a number of highly infectious and potentially fatal diseases which can affect your dog. There is no treatment for many of these diseases and young puppies who catch them often die. However, for many of these conditions there is a simple protection in the form of vaccination. Ensuring that your dog completes an initial course of vaccinations and then receives regular booster jabs is important if you want to keep your dog fit and healthy.

How do vaccines work?

Most vaccines are given by injection under the skin although some may be given as a spray up your dog's nose. They all work by training the white blood cells in your dog's body how to recognise and attack the viruses or bacteria contained in the vaccine. This should prevent infection with that particular bug if your dog is in contact with it again. Current vaccines fall into two main categories:

- **Live vaccines:** these contain a strain of the bug which has been altered so that it cannot cause disease but does stimulate immunity
- **Dead vaccines:** the bug in these has been killed by heat or chemicals.

Each type has their pros and cons - live vaccines generally give better and longer-lasting protection but they can sometimes cause more side effects. Live vaccines are not recommended for certain groups of dogs, such as pregnant females.

Which vaccinations does my dog need?

There are many vaccinations available for dogs but not all dogs need all the vaccinations every year. Nowadays, vaccines are classed as either "core" or "non-core". In general, "core" vaccines are considered those that should be given routinely to most dogs because of the highly infectious, widespread distribution and potential severity of the disease. "Non-core" vaccines are considered those for diseases against which, not every animal needs to be protected. The decision to use a "non-core" vaccine should be based on assessment of individual lifestyle and risk.

Lifestyle influencers are key to the risks of infectious disease and useful questions to consider include:

- What is the age and background of your dog?
- Where and how does he/she live?
- Are there any other pets in the home?
- Does your dog live in an urban or rural area?
- Will your dog stay in a boarding cattery or attend dog shows?

These questions may have a direct relevance to determining the appropriate vaccination programme for your dog.

Almost regardless of the individual lifestyle of a dog, UK vets recommend vaccination against distemper, parvovirus, infectious hepatitis and leptospirosis - these are generally seen as "core" vaccines. There may be other vaccinations that are appropriate for your dog and you should discuss the individual vaccination programme with your vet.

What vaccinations are there?

Canine distemper (hard pad)

Canine distemper is a serious disease of dogs caused by a virus. Affected dogs are often very ill and many die from the disease. Symptoms include coughing, a snotty nose, vomiting, diarrhoea and convulsions. Animals which recover may have ongoing illnesses for the rest of their lives. The vaccine is very effective and if given every 2-3 years will produce full protection against the disease.

Canine Infectious Hepatitis (adenovirus 1)

Canine Infectious Hepatitis is a disease caused by a virus which attacks the liver and can cause liver failure. Many animals who succumb to this disease will die. Less severely affected dogs may have a cough and high temperature and may also develop a white layer on the front of the eye. There is no specific treatment for the disease but vaccination gives good protection.

Canine parvovirus ('parvo')

Vaccinating your dog



Canine parvovirus is a disease due to a virus which causes severe vomiting and diarrhoea, usually in young puppies. Many puppies affected by the disease will die. The disease is often less severe in older dogs but if bitches are infected while they are pregnant the puppies may be born with deformities. Vaccine protection is generally very good although in some breeds, eg Rottweilers, there have been reports of young puppies catching the disease despite having been vaccinated. If this happens, it is usually because the immunity from the mother had not worn off when the vaccine was given and so the vaccine did not work properly. However, giving the final injection when the puppy is older should overcome this problem.

Leptospirosis (Weil's disease)

Leptospirosis is an infection caused by a bacterium. The disease is usually spread by rats which pass the bacteria out in their urine. The bacteria only survives well in moist conditions outside the rat, so dogs which spend a lot of time in water are most at risk. The disease is very serious and can cause jaundice and liver failure and can be spread to people as well as infecting dogs. Vaccination gives very good protection that usually lasts for a year (although dogs at high risk may need to be vaccinated more often).

Kennel cough (infectious tracheobronchitis)

Kennel cough is not a serious disease in most otherwise healthy dogs. However, it is very infectious and will rapidly spread around the dog population. As its name suggests, it causes coughing which can go on for a month in some cases. Good kennels will insist that your dog is vaccinated against this disease before agreeing to take them for boarding. The protection given by the vaccination only lasts for about 6 months so most dogs are only vaccinated just before going into kennels. Kennel cough is caused by a combination of viruses and bacteria including: Canine parainfluenzavirus, Canine adenovirus 2 and Bordetella. Ask your vet for details of which of these your dog is protected against before putting your dog in kennels.

Rabies

Vaccination against rabies is compulsory in many countries because of the risk of passing this horrible fatal disease to humans. Vaccination is unnecessary for dogs in those countries which are free of rabies - the UK, Ireland, Australia, New Zealand and Japan - except in those animals which are going to be exported abroad. Dogs in the UK may now be vaccinated against rabies for travel to some European countries or Rabies-free islands and can return to the UK without having to go through the 6 month quarantine period. Rabies vaccination has to be repeated every 2 years to maintain protection, but more frequent vaccination may be needed to comply with travelling regulations. Contact your vet for details if you plan to travel abroad with your dog.

When should my dog be vaccinated?

Puppies are protected against many infectious diseases through compounds called antibodies, which they receive in the first few hours from their mother's milk (colostrum). Early vaccination is pointless because these antibodies prevent vaccines working properly. However, by about seven weeks the immunity provided by the mother begins to wear off. Some puppies do not have good protection from their mother and these may benefit from earlier vaccination. For most of the above diseases, puppies are given their first vaccination at about eight weeks and then given a second vaccination at ten to twelve weeks. Your vet may advise starting vaccination earlier depending on individual circumstances and the product used, so always contact them for advice.

Until your puppy has received all its injections (and for a few days after), it should not mix with other dogs unless you can be certain that they are fully vaccinated and free of disease.

Why do dogs need repeat vaccinations?

Most vaccination courses start with two separate injections about three weeks apart. This course must be completed before your puppy is fully protected by the vaccine. The protection given by most vaccines wears off in time and at different rates for each particular vaccine. The level of environmental infection of many of the diseases against which we vaccinate (notably distemper and infectious hepatitis) is low. This means that it is unlikely that a vaccinated animal will come into contact with the wild strain sufficiently frequently to receive natural boosts to its immunity. Repeated vaccination is necessary to maintain adequate antibody titres in these cases. If your dog has missed the date of its regular booster vaccination by a year or two, your vet may think it is safer to start again with a new course of injections. Most kennels will insist on seeing proof of regular vaccinations before looking after your dog.

How often are vaccines given?

Vaccinating your dog



Protection afforded by vaccination is not necessarily life-long. The duration of immunity varies depending on the circumstances of the individual animal and the vaccine used. Long-term protection afforded by vaccinations varies according to the manufacturer and the antigens contained. For example, leptospirosis vaccines can provide adequate protection for less than a year in most animals. Protection against diseases can now be achieved by giving many of the other vaccines at intervals of 2 or 3 years. This varies according to the disease for which protection is required and the brand of vaccine used so ask your vet to explain the specific requirements for your pet.

Do vaccines always work?

The quality of vaccines available today is very high but occasionally an individual dog may not get the full protection from the vaccine. This may be because the dog was already ill or was stressed when it was vaccinated and its immune system wasn't working properly. Your vet will examine your dog before vaccination and if any signs of illness are detected, will delay vaccination until your dog is well again.

Can vaccinations be dangerous?

Often your dog will seem 'off colour' for a day or two after its vaccination and the injection site may also become tender and swollen. If these effects do not wear off it is worth taking your dog back to see your vet. If you are concerned about any symptoms in your dog do not hesitate to contact your vet for reassurance or advice.

Infectious disease may not seem very common in dogs because most dogs are protected by vaccination. Your dog must receive regular vaccinations to be fully protected against these diseases.

If you want any other information on health issues concerning your dog please contact your local Village Vet practice and we will be happy to advise you.