

# Canine Vaccination Information

## **What are vaccines?**

Vaccines are health products that trigger protective immune responses in pets and prepare them to fight future infections from disease-causing agents. Vaccines lessen the severity of future diseases and certain vaccines can prevent infection all together. Today, a variety of vaccines are available for use by veterinarians.

Fortunately, in Australia there are fewer highly infectious diseases of dogs than are common in other countries around the world. However outbreaks of canine infectious disease do occur from time to time around the country, and for an animal with a correct vaccination program in place the chances of this occurring are very slim.

## **How do vaccines work?**

Vaccines work by exposing the body's immune system to a particular modified infectious agent. This causes the white blood cells to react to fight the infection by producing proteins (antibodies) that are able to bind to and neutralise the infectious agent (antigen). Antibodies work together with other white blood cells (lymphocytes) that are able to identify and kill cells within the body that have become infected by the agent (cell mediated response). After vaccinal exposure the body 'remembers' the particular antigens so that when they are encountered again it can mount a very rapid and strong immune response preventing the dog from showing clinical signs of disease.

## **What diseases should my dog be vaccinated against?**

There are a number of diseases that all dogs should be vaccinated against. These are:

**(C3) Distemper.** Canine distemper is a viral disease that can affect any dog, especially puppies and unvaccinated dogs. Early signs of the disease may include a high temperature, lethargy and in-appetence. Accompanying the fever may be a discharge from the nose and eyes, vomiting, diarrhoea and coughing, with the possibility of pneumonia developing. Many dogs will also develop muscle spasms, convulsions and progressive paralysis. Permanent brain damage and death may result. Canine distemper is not as common now as it was in the past, due to highly effective vaccines being available. However outbreaks of distemper do occur in areas where vaccination rates are low. Thus, we cannot become complacent about this serious viral disease.

**(C3) Infectious Hepatitis.** Infectious canine hepatitis is a highly contagious disease caused by canine adenovirus. It can be particularly severe in young dogs and is often fatal in puppies. A carrier dog may recover, but continue to spread the virus via its urine for up to six months. Severely affected dogs will have a fever, loss of appetite, depression, diarrhoea, tonsillitis and acute abdominal pain due to an inflamed liver. Death may result within 36 hours. Corneal opacity known as "blue eye" may follow infection.

**(C3) Parvovirus.** Canine parvovirus is a highly contagious virus that attacks the gastrointestinal tract of the dog. It is a very hardy virus, which can survive for 12 months or more in the environment. Special disinfectants are required to kill the virus. The virus is usually spread when dogs come into contact with contaminated faeces and soil. Dog kennels, parks, showgrounds and nature strips are all major sources of infection. Dogs do not have to come into contact with other dogs to become infected with parvovirus. After exposure to the virus, dogs will often develop a fever and may suffer severe abdominal pain, followed by profuse vomiting and diarrhoea, which often contains blood. A high mortality rate amongst infected dogs can be expected. Some dogs may survive depending on how quickly treatment is sought. Treatment usually involves intensive care for several days in a veterinary hospital.

**(C4) Canine Parainfluenza Virus and (C5) Bordetella Bronchiseptica.** Canine Cough (or Kennel Cough as it is commonly known) is primarily caused by two organisms. It is a highly contagious disease that usually infects dogs in areas where they socialise, such as parks, obedience classes, dog shows and kennels. The classical symptom of Canine Cough is a harsh hacking cough that often finishes with gagging. The coughing is usually made worse by exercise, excitement or pressure on the throat region. Severely affected dogs may also have fever, lethargy and reduced appetite. Coughing may persist for many weeks or months despite treatment. It is important that dogs of all ages be vaccinated against all the causative organisms of Canine Cough.

**(C7) Leptospirosis:** A bacterial infection that primarily affects the liver and kidneys and is spread through contact with infected urine. Severe cases can be fatal or cause permanent kidney damage.

**(C7) Coronavirus:** A common virus affecting dogs of all ages but puppies being particularly susceptible. Coronavirus causes diarrhoea and other digestive system upsets. It has been shown to increase the severity of other diseases such as parvovirus.

## **When does my puppy or dog need to be vaccinated?**

Vets recommend the following vaccination schedule.

- 1st Vaccination 6-8 weeks – C3 Vaccine (Distemper/Hepatitis/Parvovirus)
- 2nd Vaccination 12-14 weeks – C7 Vaccine (Distemper/Hepatitis/Parvovirus/Parainfluenza /Bordetella /Corona virus/Leptospirosis)
- 3rd Vaccination 16-18 weeks – C7 Vaccine (Corona virus / Leptospirosis)
- Annual Booster – C5 Vaccine (Distemper/Hepatitis/Parvovirus/Parainfluenza/Bordetella)

In addition, consideration should also be given to administering a booster of the Protech Bronchi-Shield III Intranasal vaccine a minimum of 7-days and a maximum of 4 weeks prior to entering kennels or other high-stress situations, if it is greater than 6 months since its last vaccine.

### **Is vaccination really necessary?**

Vaccination is a very important and necessary part of your dog's preventative health program. The immunity your dog gains from being vaccinated will diminish with time. Yearly vaccination is the only way we can ensure protection against several serious and potentially fatal diseases.

Annual vaccinations are also required if your dog is to go to a boarding kennel or an obedience school. Unvaccinated animals will not be accepted in these situations.

Annual vaccinations also provide an ideal opportunity for the veterinarian to perform a complete physical examination and wellness check of your dog and to discuss any concerns you may have.

### **My dog never mixes with other dogs. Does it still need to be vaccinated?**

Yes your dog still needs to be vaccinated. Many of the diseases we vaccinate against are airborne (such as kennel cough) or can be brought into the home on your shoes (e.g. parvovirus). Your dog therefore does not need to come into direct contact with another dog to become infected.

The fact that your dog does not mix with other dogs means it is isolated. This removes any opportunity to be naturally 'vaccinated' and re-immunise themselves. As a result their level of immunity may in fact be lower than dog that are allowed outside.

### **My dog never goes to boarding kennels. Why does it need to be vaccinated against Canine cough?**

Canine cough is a highly contagious virus. It does not require direct dog-to-dog contact to be transmitted as it is an airborne virus and can be caught in the dog-park, on walks or even in your own backyard. For this reason we recommend vaccinating all dogs against the disease.

### **When can I take my puppy out now that it has had a vaccine?**

We cannot ensure that your puppy will have developed complete immunity against the diseases it is being vaccinated for until 1 week after our advised 2nd vaccine. However socialisation of your puppy is important. Puppies are best socialised to other dogs, people and places between the ages of 8 and 14 weeks. This is the same period when they are at greatest risk of being infected with disease, particularly parvovirus. We recommend that if you are to take your puppy out then avoid public places such as parks and beaches. Your puppy should only socialise with dogs that are known to be fully vaccinated and in an environment that you know has been free of any dogs with parvovirus. This dilemma of socialising a puppy versus the risk of infections such as parvovirus is one of the primary reasons why we have developed our Puppy School program. It allows puppies to be socialised in a safe environment at the correct age to allow for their development.

### **Is the vaccine 100% effective?**

The immune response is a biological response. There are a number of factors that influence this response and as such a vaccination can never be 100% guaranteed. In the vast majority of cases the vaccine will produce an immune response that results in the animal developing adequate immunity to protect against disease. There is however a very small number of animals that may not develop this required level of immunity and may still be susceptible to infection.

### **Do vaccinations have any side effects?**

It is highly unlikely that the vaccine will make your pet sick or have any side effects. A very small percentage of animals may experience a temporary reaction such as a stinging sensation or be a little lethargic for 24 hours. More serious reactions are extremely rare. Your veterinarian can discuss these in more detail with you.

Information has been adapted from Bondi Veterinary Hospital website: <http://www.bondivets.com.au/index.htm>