



## Canine Vaccines

Vaccinations or immunizations are important to help create antibodies that are needed to protect against disease. The mother dog will help to provide maternal antibodies that are delivered to the puppies during gestation and through the colostrum. These antibodies will last several weeks while the puppy is growing. Immunizations of the core distemper and parvovirus are given during a period of time that the puppies are most vulnerable-while the maternal antibodies are waning, between age 8-16 weeks. The maternal antibodies will actually interfere with the self-made antibodies, called humoral antibodies, which is why a series of immunizations are required every 3-4 weeks. The American Animal Hospital Association (AAHA) recommends vaccines be given at approximately 8, 12 and 16 weeks of age to ensure proper antibody production, with the last vaccination being given at a minimum of 16 weeks.

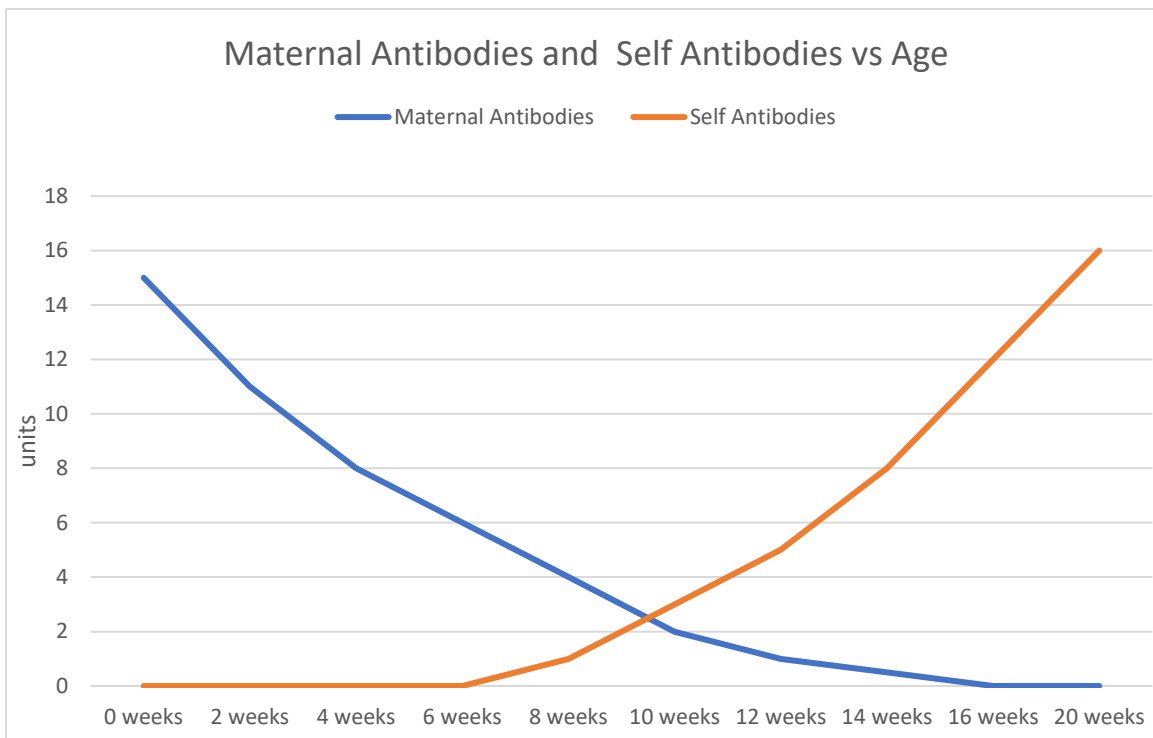


Figure 1: As the maternal antibodies decline the self antibodies from vaccines increase, protecting the puppy from disease

### Distemper Virus

Distemper virus is a virus that affects the respiratory system, gastrointestinal system and nervous system. It is very contagious amongst dogs and can be fatal. There is no specific treatment for the virus, infected puppies require intensive supportive care. Puppies that survive having distemper virus can often have long term effects such as a poor immune system. This is recommended as part of the core puppy vaccinations.





## Adenovirus

Adenovirus is a virus that affects the respiratory system and the liver causing severe hepatitis or inflammation of the liver. Supportive care is needed to help puppies with the virus as it can be fatal. This is recommended as part of the core puppy vaccinations.



## Parainfluenza

Parainfluenza is a virus that affects the respiratory system and is very contagious amongst dogs. Often causing a cough or other respiratory signs. This is recommended as part of the core puppy vaccinations.

## Parvovirus

Parvovirus is a virus that affects the immune system and gastrointestinal system causing hemorrhagic vomit and diarrhea. Parvovirus is very contagious amongst unvaccinated or under vaccinated puppies. There is no specific treatment for puppies with parvovirus other than intensive supportive care. This virus can be fatal without intensive supportive care. This is recommended as part of the core puppy vaccinations.



## Rabies

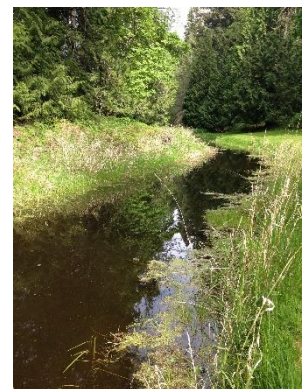
Rabies is a virus that affects the nervous system that is spread by bites from infected animals or wildlife. Rabies is most commonly found in the bat population on Vancouver Island but in other parts of Canada can be found in raccoons, skunks, foxes or rodents. Rabies is fatal with no treatment and can be spread to people. This is recommended as part of the core puppy vaccinations.

## Bordetella

*Bordetella bronchispetica* is a bacteria that spreads very easily from dog to dog and causes Canine Cough or Kennel Cough. The cough is from an infection in the trachea and bronchi. Although it is not only spread in kennels, kennels will have many dogs in close proximity allowing it to spread more easily. Dogs who interact with other dogs at parks, doggie daycare, grooming facilities or kennels should consider this vaccine based on the lifestyle risk.

## Leptospirosis

Leptospirosis is caused by a bacteria that is found in still fresh waters such as marshes, sloughs, dugouts, ponds etc. Leptospirosis can cause kidney failure, liver failure and other ailments. The incidence of this disease is on the rise on Vancouver Island in the past few years. Dogs who drink, swim, play or wade in water are recommended to be vaccinated against Leptospirosis.





## Lyme Disease

Lyme disease is caused by a bacteria spread by ticks and can cause many different symptoms, most commonly joint pain and fever. Lyme disease is common in Eastern Canada and the incidence is becoming much more common in Western Canada. Dogs who spend lots of time outdoors in areas with ticks or travel to Eastern Canada are recommended to be vaccinated against Lyme Disease.



## Nanaimo Veterinary Hospital's Canine Vaccination Protocol

Vaccine	Age of recommended vaccination
DAPP (Distemper, Adenovirus, Parainfluenza, Parvovirus) This is a 4 way combination vaccine. (Core)	8 weeks 12 weeks 16 weeks 1 year Every 3 years subsequent (Note: if initial vaccine is started after 16 weeks of age, a discussion is had when the next booster should be administered)
Rabies (Core)	16 weeks 1 year Every 3 years subsequent
Leptospirosis (based on lifestyle)	8 weeks 12 weeks 1 year Annually afterwards
Bordetella (based on lifestyle)	8 weeks 1 year Annually afterwards
Lyme (based on lifestyle)	8 weeks 12 weeks 1 year Annually afterwards

### Additional reading:

<https://www.aaha.org/aaha-guidelines/vaccination-canine-configuration/vaccination-recommendations-for-general-practice/>