

Canine Vaccine Information

Canine Vaccines: Benefit & Risks

Vaccines resemble infectious agents like bacteria or viruses (disease causing). When vaccines are administered to an animal, they “train” the immune system to protect against these infectious agents.

Vaccines work by training the immune system to recognize infectious agents by producing antibodies which are specialized proteins that bind like a lock and key to the infectious agent, and trigger actions to defeat the agents. When vaccinated dogs come in contact with these agents the body quickly recognizes and activates the antibody-producing cells that recognize the agents, producing an “immune response.”

Puppy Vaccine Schedule

Age	Core Vaccines
6-8 weeks	DA2PP
10-12 weeks	DA2PP (Rabies can be given at 12 weeks)
16-18 weeks	DA2PP, Rabies (if not done at 12 weeks)
12 months (1 year)	DA2PP, Rabies

Risk Based Vaccines (Non-Core Vaccines) - to discuss with a DVM

Risk Based	Initial Series	Revaccination
Bordetella	Minimum age: 8 weeks	Revaccinate every year
Leptospirosis	First vaccine at minimum 12 weeks of age Booster 4 weeks after first vaccine	Revaccinate every year

Adult Dog Vaccine Schedule

Cats	Initial Series	Revaccination
DA2PP	Unvaccinated/Not Current:	Administer 2 initial doses 2-4 weeks apart
Rabies	Unvaccinated/Not Current: Vaccinate from 12 weeks of age	Revaccinate in 1 year, then every 3 years



Vaccine information

We read about many vaccinations, for many illnesses. It can be confusing to know which vaccinations puppies need (core vaccines) and which ones are important but optional (non-core).

Core and non-core vaccine definitions:

- Core vaccines are required for every dog, regardless of their lifestyle.
- Non-core vaccines may be needed depending on your pet's risk of exposure to disease.

During your dog's wellness appointment, a veterinarian will discuss your pet's lifestyle with you. This will allow them to make a vaccine plan tailored to your pet's unique needs.

Here is an overview of the diseases that vaccinations will help your pet to avoid.

Core Vaccines

Canine Distemper: A severe and contagious disease caused by a virus. The virus attacks the lungs, digestive system, and nervous system of dogs and other animals. Distemper primarily spreads through air (sneezing or coughing) from an infected animal, but can be shed in nearly all bodily fluids.

The virus can spread by shared food and water bowls and equipment. It causes discharge from the eyes and nose, and fever. It causes coughing, vomiting and diarrhea. It can cause seizures, twitching, paralysis, and, often, death.

There is no cure for distemper. Treatment consists of supportive care and efforts to prevent secondary infections. Controlling vomiting, seizures and other symptoms is important. If the dog survives the symptoms, the dog may have a chance to fight it off. Infected dogs can shed the virus for months.

Canine Hepatitis: Infectious canine hepatitis is a contagious viral infection caused by canine adenovirus-2. It is spread by dog-to-dog contact or by exposure to infected fomites. Fomites are objects such as clothing, dishes or doorknobs that can be contaminated with infectious agents. It affects the liver, kidneys, spleen, lungs, and the eyes of the affected dog. The virus is not the same as the virus in people.

Clinical signs range from a slight fever and congestion of the mucous membranes to vomiting, jaundice, stomach enlargement, and pain. Dogs that survive may develop liver or kidney disease. Canine hepatitis can kill, including sudden death. There is no cure, but doctors can treat the symptoms.

Canine Parainfluenza: One of several viruses that can contribute to kennel cough.

Parvovirus: Parvo is a highly contagious virus that affects all dogs. Dogs and puppies less than four months of age are at the most risk of contracting it. The virus attacks the digestive system and white blood cells. It causes a loss of appetite, vomiting, fever, and often severe, bloody diarrhea. Extreme dehydration can come on rapidly and kill a dog within 48-to-72 hours.

Prompt veterinary attention is crucial. There is no cure. Keeping the dog hydrated and controlling the secondary symptoms is necessary to see if the dog can recover.



Rabies: Rabies is a viral disease of mammals. It invades the central nervous system. It is a zoonotic disease, meaning that it can spread from animals to people.

It causes headaches, anxiety, hallucinations, excessive drooling, and fear of water. Paralysis, and death often occur. It is most often transmitted through the bite of a rabid animal. Treatment within hours of infection is essential, otherwise, death is highly likely.

Vaccination is usually required by law because of how serious this disease is. All puppies and adult dogs should be vaccinated against rabies.

Non-Core Vaccines

Kennel Cough/Bordetella Bronchiseptica: Also known as Canine Infectious Respiratory Disease Complex, kennel cough is caused by multiple different bacterial or viral infections. Common causes are Bordetella and canine parainfluenza. Kennel cough can involve multiple infections at the same time.

Bordetella is an infectious bacterium that commonly causes kennel cough. There are injectable, oral, and nasal spray vaccines available.

Usually, the disease is mild, causing bouts of harsh, dry coughing. Sometimes it is severe enough to spur retching and gagging, along with a loss of appetite. In rare cases, it can be deadly. It is spread between dogs kept in close contact.

Antibiotics are usually not necessary, except in severe, chronic cases. Cough suppressants can make a dog more comfortable.

Please see [this link](#) for additional information regarding Bordetella.

Canine Parainfluenza: One of several viruses that can contribute to kennel cough.

Leptospirosis: Leptospirosis is caused by a bacterium. Some dogs may show no symptoms at all. Leptospirosis is found worldwide in soil and water. It is a zoonotic disease, meaning that it can spread from animals to people.

If clinical signs do appear, they can include fever, vomiting and abdominal pain. Diarrhea, loss of appetite, severe weakness and lethargy can occur. Stiffness, jaundice, muscle pain, and kidney disease can occur. Antibiotics can treat the infection if caught early.

To reduce exposure to leptospirosis, it is important to prevent your dog from drinking out of slow-moving or stagnant water (i.e., puddles, ponds). Minimizing contact with wildlife is important as well.

Please see [this link](#) for additional information regarding leptospirosis.

Lyme Disease (spread by Ticks): Lyme disease (or Borreliosis) is an infectious, tick-borne disease. It is caused by a type of bacteria called a spirochete. Borreliosis is spread by deer ticks. An infected dog may limp or get a fever. There may be swelling of lymph nodes. The disease can affect many



parts of the body. It can also lead to neurologic disorders if left untreated. If diagnosed quickly, treatment with antibiotics is helpful. Relapses can occur months or even years later.

Prevention is key with tick prevention medication and Lyme vaccination. Dogs can be carriers of Lyme disease without showing any symptoms. It is important to test for Lyme disease yearly, and whenever exposed to ticks.

Lyme vaccine is not provided through Toronto Humane Society. Owners will need to contact a private veterinarian

References:

- [*Veterinary Partner*](#)
- [AVMA](#)
- [AAHA](#)
- [OVMA](#)

