



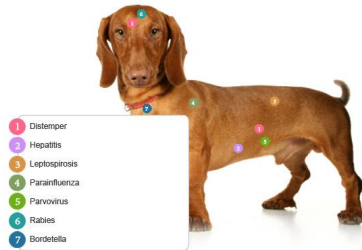
Vaccines are health products that trigger protective immune responses in pets and prepare them to fight future infections from disease-causing agents. Vaccines can lessen the severity of future diseases and certain vaccines can prevent infection altogether. Today a variety of vaccines are available for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

CANINE VACCINES:

DHPP→ This vaccine protects dogs against Distemper, Hepatitis, Parvovirus and Parainfluenza

- **Distemper:** Distemper is a contagious and serious disease caused by a virus that attacks the respiratory, gastrointestinal and nervous systems of puppies and dogs. Initially, infected dogs will develop watery to pus-like discharge from their eyes. They then develop fever, nasal discharge, coughing, lethargy, reduced appetite and vomiting. As the virus attacks the nervous system, infected dogs can develop circling behavior, head tilt, muscle twitches, convulsions with jaw chewing movements and salivation ("chewing gum fits"), seizures and partial or complete paralysis. The virus may also cause the footpads to thicken and harden, leading to its nickname "hard pad disease". Distemper is often fatal, and dogs that survive usually have permanent, irreparable nervous system damage. To see an example of how a dog with Distemper may behave, watch this video: <https://www.youtube.com/watch?v=ld9YL-10gzg>
- **Hepatitis:** Infectious Canine Hepatitis is a highly contagious viral infection that affects the liver, kidneys, spleen, lungs and eyes in dogs. It occurs worldwide, though it is rare in the United States, and it mostly affects young dogs under one year of age, though it can affect adults. Most cases occur in wild or unvaccinated dogs. This disease can cause a wide range of signs and symptoms. These can range from mild to severe and include nausea, vomiting, coughing, abnormal bleeding/bruising, drinking and urinating more than usual, loss of appetite, jaundice, seizures, swollen lymph nodes, pale tongue and gums and fever.
- **Parvovirus:** Canine Parvovirus is a highly contagious virus that can affect all dogs, but unvaccinated dogs and puppies younger than four months old are the most at risk. The virus affects a dog's rapidly dividing cells, such as those in the gastrointestinal tract and bone marrow, and is spread by direct dog-to-dog contact and/or contact with contaminated feces (stool), environments or people (such as their clothing). The virus can also contaminate kennel surfaces, food and water bowls, collars, leashes and the hand and clothing or shoes of people who handle affected dogs, and is readily transmitted from place to place. It is resistant to heat, cold, humidity and drying, and can survive in the environment for long periods of time. Even trace amounts of feces from an infected dog may harbor the virus and infect other dogs that come into the infected environment. Some signs of Parvovirus include lethargy, loss of appetite, abdominal pain and bloating, fever or low body temperature, vomiting and severe, often bloody, diarrhea. Persistent vomiting and diarrhea can cause rapid dehydration, and damage to the intestines and immune system can cause septic shock. Most deaths from parvovirus occur within 48-72 hours following the onset of clinical signs.

- **Parainfluenza:** Parainfluenza virus includes many general symptoms seen in other infections, viruses and diseases. Symptoms can vary in intensity and commonly affect younger puppies and aging dogs the worse. This virus is commonly mistaken for kennel cough, as the symptoms between the two are similar. Some symptoms of parainfluenza virus include: dry or hacking cough that may worsen with activity, fever, difficulty breathing, wheezing, runny nose, sneezing, runny or inflamed eyes and pneumonia with depression, loss of appetite and lethargy.
- At OAH we follow the AVMA (American Veterinary Medical Association) recommendation of vaccinating puppies at 6, 8, 12 and 16 weeks of age, then every 2-3 years. OAH considers this a core vaccine.



Leptospirosis: Leptospirosis is a bacteria spread by the urine of wild animals such as mice, voles and moles that live in your backyard. Leptospirosis is zoonotic (can be passed to people) from contact with the urine of an infected dog. In some cases, a leptospirosis infection is asymptomatic. When symptoms do occur they can include fever, muscle pain, vomiting, diarrhea, loss of appetite, lethargy, depression, blood in the urine and organ failure. We start vaccinating puppies for Leptospirosis at the age of 12 weeks, with a booster 2-4 weeks later. This vaccine needs to be boosted annually. OAH considers this a core vaccine.

Bordetella: This vaccine helps protect dogs against "kennel cough" of infectious tracheobronchitis. It is often a mild disease, but the cough may be chronic, lasting for several weeks in some cases. Common clinical signs include a loud cough often described as a "goose honk", runny eyes and nose, swollen tonsils, wheezing, lack of appetite and depressed behavior. In puppies, seniors and immune-compromised pets infectious tracheobronchitis can even cause severe disease and pneumonia. Most dogs with infectious tracheobronchitis will cough when the throat is rubbed or palpated. Often, the hacking cough caused by kennel cough will persist for several weeks after the infection. To hear a dog with kennel cough check out this video: <https://www.youtube.com/watch?v=uNYhZoxijE>

Infectious tracheobronchitis is extremely contagious and many dogs don't develop signs for 7-10 days after exposure. OAH recommends that any dog that is social be vaccinated at least annually. This can include dogs that meet dogs in the neighborhood, go on walks, frequent dog parks, grooming and boarding facilities and dogs that are frequent visitors to the veterinary clinic. There are occasions where vaccination every 6 months is recommended. OAH considers this a core vaccine.

Lyme: Lyme disease bacteria (*Borrelia burgdorferi*) is a bacteria transmitted through ticks and is prevalent in our area of Wisconsin and can cause damage to canine joints, kidney and other tissues. Since ticks can bite and spread disease throughout all of their life stages, we recommend year round tick prevention. No preventative is perfect, however, and we can help protect your dog from Lyme disease.

Dogs get an initial vaccine stat at around 12 weeks of age and again 2-4 weeks later. We also boost this vaccine annually. A dog can start the Lyme series at any time. Although we do not consider this a core vaccine, we are vaccinating more and more dogs for Lyme due to the alarming increase of disease we are diagnosing.

Rabies: Rabies is an infectious viral disease that is always fatal following the onset of clinical symptoms. In up to 99% of cases, domestic dogs are responsible for rabies virus transmission to humans. Yet, rabies can affect both domestic and wild animals. It is spread to people through bites or scratches, usually via saliva. This vaccine is typically given to puppies and kittens around 16 weeks of age. The first time an animal gets a rabies vaccine, it lasts for 1 year. Both dogs and cats receive a 3 year vaccine thereafter. Rabies vaccination is required by state law for dogs and is recommended in cats, even if they don't go outside. OAH considers rabies a core vaccine.

Prevention is better than cure, especially if something has no cure.