

Distemper

This virus is part of what the $\underline{\mathbf{D}}$ HPP, or 4 in 1 (or 5 in 1), vaccine fights. This is the "D" in DHPP, DHLPP, or the main part of the 4 in 1 and 5 in 1 vaccine.

Distemper is widespread, serious, often deadly, and can affect almost any carnivore, wild or domestic. Canine distemper is a contagious viral disease, seen most frequently in puppies 3 to 6 months old, but dogs of all ages are at risk..

Early signs of the disease are fever, loss of appetite, lethargy, conjunctivitis (runny eyes), and sometimes a nasal discharge.

As the disease progresses, symptoms include diarrhea, pneumonia, convulsions, and paralysis. Prevention by vaccination is recommended as the essential means of controlling canine distemper. Start vaccinating ideally at 9 weeks, then re-vaccinate every 2-4 weeks until 16 weeks, then annual booster.

Canine distemper disease can infect any organ system, but frequently attacks the nervous system. 90% of dogs that become infected will die. The disease is difficult to survive, since young puppies are most frequently infected. Thus, **vaccination** is essential.

Hepatitis

Another component of the 4 in 1 and 5 in 1, or DHPP/DHLPP vaccine. Infectious Canine Hepatitis is a contagious viral disease that affects the dog's liver, primarily. Early signs are similar to those seen in Distemper. The disease is transmitted by direct contact with urine from an infected dog. The canine strain of hepatitis does not cause hepatitis in humans.

This disease can cause fever, enlarged liver, pain, and even death. It can also cause respiratory tract illness. **Vaccination** with the Adenovirus Type 2 vaccine (CAV-2) is very effective in preventing this disease.

Adenovirus type 1 causes Hepatitis, but you never want to vaccinate with the Adenovirus 1 (CAV-1) vaccine, which can cause severe side-effects (blue-eye, kidney infections). Adenovirus type 2 causes pneumonia. Respiratory tract illness caused by type 2 is spread by aerosol droplets. The vaccine (type 2, CAV-2) provides protection for both type 1 and type 2 infections.



Leptospirosis

This is the L component of the 5 in 1, or DHLPP vaccine. (not included in the 4 in 1 - DHPP vaccine).

Leptospirosis is an infectious bacterial disease transmitted by contact with the urine of an infected dog, rat, or other wildlife. Infection occurs through oral mucous membranes, the cornea of the eye and the skin. The disease can produce very severe symptoms of high fever, depression, jaundice and internal bleeding, and eventual death. Recovered animals may suffer from chronic kidney disease.

Any dog that goes outside to use the bathroom, or has a chance to sniff puddles of water, can be at risk for Lepto, especially in areas with rodents and racoons. Unless your dog is allergic to the vaccine, it is recommended for most dogs over **3 months of age**.

Leptospirosis can be spread from dogs to humans, so prevention of the disease in pets is of paramount importance. Dogs often become carriers and shedders of the bacterial organism; thus vaccination is a most important element in controlling the disease. Nonetheless, there are some possible "negatives" attached to this vaccine.

For example, there are many strains of Lepto that can cause the disease. However, there is no vaccine currently available to use as protection against many of these strains. Also, this vaccine often causes allergic reactions, fever, and muscle aches in vaccinated pets. Also, the vaccine is only good for about 4-6 months.

Parvovirus

Another part of the DHPP or DHLPP vaccines. (4 in 1 and 5 in 1) This virus causes bloody diarrhea and vomiting, and mainly infects puppies. Parvo is highly contagious and difficult to survive – dogs must be hospitalized to live. The bills can reach over \$1,000 and the dog may still die. Vaccination is the safe and recommended preventative course of action.

Transmission of Parvovirus organisms occurs through the infected dog's feces and can be transported on the fur/hair or feet of infected dogs, on clothing and by contact with inanimate objects like food bowls and toys. The virus is particularly resistant and can persist in the environment for many months. Minimizing contact with other dogs and their stool and the use of a chlorine-based disinfectant can control the spread of the disease to some degree.



Parvovirus is highly contagious, and attacks rapidly dividing cells, most commonly intestinal cells, and sometimes the heart muscle cells as well. Because the intestinal cells are destroyed, nothing is able to be absorbed in the intestines, and violent, bloody diarrhea and vomiting results. Secondary endotoxic shock occurs, forming infection through the denuded intestinal tract. Dogs in this condition quickly dehydrate. Even hospitalization and treatment does not ensure recovery from Parvovirus. Therefore, **vaccination** is recommended – ideally starting at 8 weeks old, vaccinating every 2-4 weeks until at least 16 weeks of age, then booster annually.

Parainfluenza

Another part of the DHPP or DHLPP vaccines. (4 in 1 and 5 in 1)

Parainfluenza is a common, though highly contagious, viral upper respiratory disease. The signs may be very mild but may progress if other conditions exist. Since signs are mild, the disease can be spread to other unprotected dogs without being readily noticed.

Transmitted by sneezing or coughing (nasal secretions by infected dogs), Parainfluenza contributes to upper respiratory disease and infection tracheobronchitis. The vaccine to protect against this disease is combined with other vaccines (in 4 and 5 in 1 vaccine) to offer broader protection. We recommend starting **vaccination** as early as 8 weeks old, vaccinating every 2-4 weeks until 16 weeks old, then booster annually.

Bordetella

Bordetella Bronchiseptica is a bacterial agent that causes the respiratory disease, **kennel cough**. The kennel cough disease can also be caused by a lot of other viruses & bacteria. It is like the different strains of the flu. Specific types of infectious agents causing this disease are the viral agents Canine Adenovirus Type 1 and Type 2, and Canine Parainfluenza. These highly contagious airborne agents cause mild to severe inflammation of the trachea, bronchi, and lungs. Kennel cough is characterized by a harsh, chronic cough, as well as possible nasal discharge and sneezing. It is usually considered to be a self-limiting disease, unless pneumonia develops from secondary bacterial complications. The dry, non-productive cough may last for weeks to months after the resolution of the clinical disease due to the damage done to the trachea. Most boarding facilities **require** this vaccine; and dogs that live in shelters, pounds, or kennels should receive protection through vaccination.



Please note: This vaccine does not prevent a dog from acquiring Kennel Cough (the lay term for Bordetella type respiratory syndromes); however, it does help <u>prevent a dog from developing pneumonia from a case of Kennel Cough</u>.

Bordetella is a bacteria that causes kennel cough. Vaccines do not protect against bacteria; rather, they stimulate immunity against viruses. This vaccine is actually an inactivated form of the bacteria that will stimulate enough immunity to reduce the severity of the disease. In short, the Bordetella vaccine aids in the prevention of the development of pneumonia caused by kennel cough. Therefore, **vaccination** is recommended.

There are 2 types of this vaccine: 1) *Intranasal*, which provides more immediate, local immunity. Dogs may sneeze or have a runny nose for a few days afterward. 2) *Injectable*, which provides longer lasting immunity, but takes longer to develop immunity. Dogs may get a mild fever or muscle aches after the vaccination.

The *Intranasal* Bordetella Vaccine requires only one dose in adult dogs, but immunity is only a couple months. Puppies should receive a booster every 2 to 4 weeks (starting at 8 weeks), until they reach 16 weeks old. But again, immunity is not long-lasting. The *Injectable* Bordetella Vaccine should be boostered as most and will provide long-lasting immunity. However, there is a higher incidence of reactions and side-effects from this vaccine variety, and a slight sting upon injection.

Canine Heartworm Disease

Heartworm disease can infect both cats and dogs. This disease is spread by mosquito bite. Heartworms are 12 inch worms that live in the heart and impede the heart's functioning. Dogs can develop heart failure over several years and can die.

Protection from heartworms can be provided by a monthly, chewable pill, such as <u>Triheart</u> or <u>Heartgard</u>. Dogs over 7 months of age must be tested for heartworms prior to starting the preventative. Adult dogs should be tested annually, even if they have not missed a single dose of preventative. Any dog that misses several months of preventative, should be tested before starting preventative again, and in 6 months.

Puppies should start preventative before 7 months old (8 weeks, ideally). However, we do not require heartworm testing if puppy is under 7 months.



Canine Heartworm Testing

Peggy Adams offers Heartworm Testing for dogs. A "snap test" is used. This is an occult test for antigens in the blood that are only present if there are mature Heartworms in the dog's heart.

All dogs must be **tested annually** to renew their prescription for heartworm preventative. Clients whose pets were tested at another facility must show proof of a negative heartworm test within the past year to fill a prescription from another veterinarian.

Dogs 7 months of age or younger do not need to be tested to begin heartworm preventative. Clients with puppies under 7 months of age should be informed of heartworm disease and prevention and advised to purchase the first six month's supply of heartworm preventative.

Deworming

Peggy Adams will deworm an animal for hookworms, roundworms, and tapeworms.

**We recommend starting the puppy with their first vaccinations at 9 weeks of age because this age is when the immunity, they received from their mother is fading, thus leaving the puppy unprotected. Vaccines given prior to the maternal immunity wearing off will do no good. If we wait too long after the maternal immunity wears off, we are risking the unprotected baby puppy might be exposed to and contract a virus. Therefore, 9 weeks has been determined to be the appropriate age to start vaccinating the majority of puppies.

After your puppy has finished its booster series, you may bring him/her back in **one year** to revaccinate.