



## WHITE SHEPHERD GENETICS P R O J E C T

### Dog Vaccine Schedule & Brief Description of Canine Infectious Diseases

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The topic of vaccines at this time is quite controversial. I thought I would begin with some general information about a typical vaccine schedule and review the definitions of the diseases that these vaccines purport to prevent. In a subsequent article, I'd like to try presenting the more controversial question of when and if we should continue to vaccinate our dogs.

#### HOW VACCINES ARE ADMINISTERED

Subcutaneous (SQ) vaccines are administered under the skin on the right shoulder of your dog. Intramuscular (IM) vaccines are administered directly into the muscle. You may give these vaccines yourself or have your veterinarian give them

#### TYPES OF VACCINES

Dog vaccines are either modified, killed and subunit (similar to killed).

**Modified 'live' vaccines** are composed of microorganisms which are altered so that they do not cause infection in most dogs, but they are still capable of replicating and provide stronger, longer-lasting, and more rapid protection as long as there are not maternal antibodies or immune system diseases present which interfere with the action of the vaccine. However there is a higher frequency of an adverse reaction and therefore not all dogs are good candidates for immunization with modified live vaccines.

**Killed vaccines** are composed of 'inactivated' microorganisms, which cause a particular disease. Because they are dead they cannot replicate once injected into your dog's body and therefore cannot produce the disease. Therefore the killed vaccines are considered to produce less risks for an adverse reaction but also produce a lower immune response, shorter duration of protective immunity and do require booster vaccinations to provide enough protection for your dog.

**Subunit vaccines** are made up not of the whole microorganism but only the part that produces an immune response. Therefore, subunit vaccines are similar to killed vaccines in that they are not infectious and present a low risk for adverse reaction. However, like the killed vaccines, subunit vaccines do not provide strong protective immunity for long periods of time. Because of these factors as well as the higher cost

for production, subunit vaccines are used less than the modified live and killed vaccines.

**Other** - Before vaccination, your dog(s) should have a normal temperature (101.5 to 102 degrees Fahrenheit). Vaccinate your females **before** breeding; do not vaccinate your pregnant female. Also keep in mind that all dogs receive the same dose no matter the size or weight of the dog.

**Most Common Vaccines Used.** The most common dog vaccine is the **5-way**, or DPAHP. This stands for Distemper, Parvovirus, Adenovirus, Hepatitis and Para influenza. If you add Coronavirus it makes it a **6-way** vaccine. A **7-way** vaccine includes two strains of Leptospirosis but deletes the Coronavirus. An **8-way** vaccine includes all of the above. You have many to choose from. Some of these vaccines for example Leptospirosis and Coronavirus may not need to be given if it is not prevalent in your area. Lyme vaccine and Bordatella (kennel cough) as well as rabies are given separately.

#### A TYPICAL DOG VACCINATION SCHEDULE

- Age 6 and 9 wks: 5-way (Plus Coronavirus if prevalent in your area), also Bordatella if your dog is in a kennel or exposed to many other dogs
- Age 13 and 15 weeks: 7-way (plus Coronavirus and Lyme if prevalent in your area. Also Rabies and Bordatella (if out and about and exposed to other dogs)
- Adult (annual booster) 7-way (plus Coronavirus and Lyme again if prevalent in your area) Bordatella if dog is out and about; Rabies vaccines given 1-3 years depending on state law.
- The vaccine schedule may also with the manufacturer of the vaccine so vets offices or instructions for vaccines if giving your own may vary somewhat.

#### DESCRIPTION OF RISKS AND CONSEQUENCES OF CANINE INFECTIOUS DISEASES

**Canine Distemper** is considered the most serious viral disease of dogs in the world. It is a widespread, often fatal viral disease. Approximately 90% of non-vaccinated, non-immunized dogs infected with CD will die or become neurologically damaged in some way if left untreated. Distemper is often resistant to treatment, but can be prevented through

vaccination. The disease is considered airborne and is highly contagious. It's more frequent and acutely affects pups under 3 months.

**Canine Parainfluenza** is a highly contagious respiratory disease which contributes to upper respiratory disease and infectious 'croup'. It is often a mild respiratory infection in otherwise healthy dogs but it can be severe in your puppies or your elderly or debilitated dog.

**Canine Adenovirus Type-1 And Type -2** cause **infectious hepatitis** and respiratory infection, respectively. Hepatitis cause by adenovirus type1 may cause severe kidney damage or death. Common signs of this disease include listlessness, fever, loss of appetite, vomiting, excessive thirst, and discharges from the eyes and nose. Adenovirus type-2 is an important factor in **kennel cough**.

**Canine Bordetella** may contribute to kennel cough. This bacterial infection can occur alone or in combination with distemper, adenovirus type-2 infection, parainfluenza, and other respiratory changes.

**Kennel Cough** - There is no vaccine for complete protection against infectious canine cough. Thirteen different viruses and bacteria are implicated as its cause. Currently vaccines are available for 3 of the 13 known components of the disease complex. These three include **Parainfluenza, Adenovirus Type 2,** and **Bordetella**. By vaccinating for these 3 diseases, 90% of the cases of kennel cough can be eliminated. Canine cough is usually a mild, self-limiting disease, but it can develop into a severe bronchopneumonia, especially in younger dogs. The most common sign of this disease is a harsh unproductive cough that leads to gagging or even vomiting.

**Infectious Canine Hepatitis** infections are characterized by fever, low white blood cells, enlarged tonsils, enlarged liver, kidney inflammation and occasional eye cloudiness. Vaccination with modified live canine hepatitis vaccine, though effective in disease prevention has certain disadvantages. Following vaccination, persistent kidney infections may occur, causing vaccine virus shedding in the urine. Cloudy or 'blue eyes' are occasionally observed 1-2 weeks post-vaccination. While viral hepatitis is not as common as it once was in dogs, it has not been eliminated as a threat.

**Canine Coronavirus** is a highly contagious intestinal disease causing vomiting and diarrhea in dogs of all ages. Dehydration from Coronavirus infection can be life-threatening, especially in young puppies. The symptoms of this disease include lethargy, anorexia and depression. Sudden onset of vomiting will likely occur and sometimes blood may be found. Projectile diarrhea is moderate to severe; Feces are yellow-orange and occasionally mucus may be found as well.

**Canine Parvovirus 'Parvo'** is a widespread disease, which may cause dehydrating diarrhea in dogs of varying ages. This infection is especially dangerous for puppies and very old dogs. In some instances, parvovirus leads to secondary heart disorders. Parvovirus is characterized by a sudden onset of vomiting and diarrhea, often with blood. . Any puppy exposed to the virus during the susceptibility period will most likely come down with the disease, regardless of many vaccination schedules. All vaccines will (post 2 weeks from vaccination) protect your dog from the virus if the maternal antibody does not prevent immunization. There are some newer types of parvovirus vaccines which do not interfere with maternal antibodies.

**Canine Leptospirosis** is an acute bacterial infectious disease that is characterized by lethargy, fever and loss of appetite. Leptospirosis may lead to permanent kidney damage. The disease is easily spread to other pets and to humans. The mucous membranes are usually congested. Jaundice indicates severe liver involvement. The kidneys can also be damaged, resulting in uremia, vomiting, dehydration, polyuria (excessive urination) and polydipsia (excessive thirst)

**Lyme Disease** is a bacterial disease caused by *Borrelia Burgdorfen*, may be spread by insects such as flies, fleas and ticks. Arthritic-like symptoms may occur.

**Rabies** is a disease that has reached epidemic proportions throughout the United States and is almost always fatal. Rabids virus attacks the brain and central nervous system. It is transmitted to humans chiefly through the bite of an infected animal. States vary regarding the intervals for this vaccine. ■

*Source: Discount Pet Supply and Wing and Wave Labradors Internet articles.*

# www.wsgenetics.org

The new genetic health charts have been uploaded to the Genetics Project website. A printed copy of the charts can be obtained by calling Joanne Chanyi at 519-847-5206. This information comes to you from the many people who have embraced this project, to give the gift of health to these dogs that give us the gift of love.