DANADA VETERINARY HOSPITAL, P.C.

Vaccine Reactions in Dogs

Vaccinations are essential to the preventative care of our patients. They provide immunity against some of the deadliest viruses and bacteria that dogs are exposed to in their everyday lives. In addition, they help to provide communal protection in situations where animals are comingled such as boarding, and dog parks. Lastly, vaccines for our dogs help to minimize transmission of diseases that can be passed from animals to humans (zoonotic diseases).

Normally the immune system reacts to antigens (inactivated or dead particles of the viruses and bacteria) in the vaccines. This response creates long-lived antibodies that protect the body if it is ever faced with the actual disease. If the immune system is too sensitive to these antigens, it over-reacts and triggers an allergic reaction, commonly referred to as a vaccine reaction.

Why Do Vaccine Reactions Occur?

Much like people with peanut or bee-sting allergies, predicting which patients will have a reaction is impossible. While patient size and the number of antigens given at one time are believed to play a role, the biggest factor is how sensitive an individual's immune system is. Some individuals have a very sensitive immune system and can react to a single vaccination. Others may receive 4-5 vaccines at one time without incident. There is no way to know how sensitive an individual is until the immune system is challenged.

More predictably, dogs with any illness that compromises the immune system are at higher risk of vaccine reactions. Examples of these conditions include allergies, infections, or any condition that causes a fever.

What Are the Symptoms Of A Vaccine Reaction?

Most reactions occur within a few hours of the vaccinations. Mild reactions such as sleepiness or tenderness at the site of vaccination are most common and can usually be managed at home. Significant signs that require veterinary attention are:

Vomiting
Swelling of the face (Muzzle, Eyelids, etc.)
Pale colored gums
Hives (red, raised bumps on the surface of the skin)
Collapse or pronounced lethargy.

Are Vaccine Reactions Treatable?

Most reactions are easily managed but require prompt care. Medications are given to settle the immune system down, and control symptoms. Occasionally fluid therapy is necessary. Fortunately, most reactions respond quickly and do not have lasting effects.

How Can Vaccine Reactions Be Prevented?

Split up vaccinations-When patients are due for multiple vaccinations at the same time, shots can be split up by 2-4 weeks. This allows the immune system to respond and recover to the first set of vaccines before introducing the remaining shots.

Use 3-year vaccines (when appropriate)-Although theses vaccines have slightly more antigens, they do not need to be given every year. This minimizes the number of vaccines a patient receives in any given year and over their lifetime. Most 3-year vaccines are just as well tolerated as their 1-year counterparts. In vaccine-sensitive dogs, the 3-year shot is often given at a separate visit from the rest of the vaccinations.

Avoid vaccinating at times when the immune system is compromised-If patients have allergies, vaccinations should be scheduled at the time of year that the allergies are at their mildest. Infections should be resolved prior to introduction of vaccines.

Note previous vaccine reactions-If previous vaccine reactions were noted, a combination of antihistamine and steroid given prior to vaccination will lessen the risk of recurrent reactions.

Isn't It Better to Just Not Vaccinate?

Vaccine avoidance is a poor strategy to cope with vaccine reactions. Reactions are uncommon. When they do occur, they are easy to manage and have no long-term ramifications when treated appropriately. The same cannot be said of the diseases the vaccines cover for. Canine distemper, rabies, parvovirus, hepatitis, leptospirosis, and lyme disease can all be prevented with vaccination. However, if contracted by an unvaccinated individual, each of these illnesses can create serious or even fatal diseases in dogs. In addition, rabies and leptospirosis pose risks to humans that are in contact with an infected dog as well.