



What Every Owner Should Know About Vaccines:

Vaccines have become a very controversial topic in veterinary medicine. It's important that pet owners are well informed so they can make the best decision possible for their dogs and cats. We've compiled a few pages of helpful information to help clear up some of the confusion and help you keep your pet on the healthiest, happiest track possible. The American Animal Hospital Association has released a number of recommendations regarding vaccination and much of the information in this handout is based on their suggestions.

Veterinary medicine as a group can agree that vaccines are important. Our ability to prevent infectious diseases in our pets has greatly improved their lives. Early vaccines did not enjoy the same safety and effectiveness of our current vaccines, and so the recommendations for annual boosters reflected this. There was a general "better safe than sorry" approach because the diseases these vaccines were designed to prevent were widespread and devastating. Now deaths due to these same diseases have been largely preventable thanks in part to immunizations.

How Vaccines Work

Ideally, vaccines provide two kinds of protection from a disease—they create cells that provide immediate protection, and cells that provide long term immunity. Some vaccines are unable to prevent infection and instead lessen the clinical signs of the disease.

There are two primary kinds of vaccines. The first is a modified live virus - these vaccines provide immunity similar to the immunity a dog might have after recovering from a natural infection and are often highly effective. The second type of vaccine is made from a killed virus. This is used when administering a live form of the disease would be dangerous. Killed vaccines generally have a slower immune response and can require additional doses.

New vaccine programs recommending three year boosters have been adopted to varying degrees, mostly because there have been misunderstandings and miscommunications. The American Veterinary Medical Association updated their vaccine recommendations after recognizing that "traditional" guidelines for annual immunizations were no longer necessary. However, their guidelines are flexible and intentionally allow room for doctors to develop their own vaccine program, as there is still some debate.

Under the American Animal Hospital Association guidelines, vaccines are divided into three major classifications. There are core vaccines (those which are recommended for all healthy pets), non-core vaccines (appropriate for pets deemed at risk of exposure) and not generally recommended vaccine.

To Titer, Or Not To Titer

Vaccine titers have become very common place as owners strive to avoid over-vaccinating their dogs. A simple blood test, the titer evaluates the antibodies present for Parvovirus and Distemper and determines the patient's protection against the diseases. If the antibody numbers are low, a vaccine is necessary. If the antibodies indicate protective immunity, no immunization is needed at that time. There is no evidence that your dog's immune system is much different than a humans, and vaccinations in people are extremely long lasting—in some cases, providing life-long protection.

Core Canine Vaccines

Canine Distemper Virus - This disease is associated with respiratory, gastrointestinal and neurologic abnormalities. It has a very high death rate in unprotected animals. There is very little geographic difference in its geographic distribution. After your dog's initial vaccine series, revaccinating every three years is considered protective for Canine Distemper Virus.

Canine Parvovirus - This disease has a high fatality rate in unprotected dogs primarily from gastrointestinal disease. It has a worldwide distribution. Following the initial vaccine series, revaccinating every three years is considered protective.

Canine Adenovirus-2 - This one's a little complicated... Adenovirus-1 and -2 are respiratory diseases that contribute to the development of infectious hepatitis. The vaccine administered against Adenovirus-1 has been associated with a number of serious reactions. The Adenovirus-2 vaccine is much safer, and can provide some cross-protection against the -1 strain. Revaccination every three years is recommended.

Rabies Virus - This virus causes fatal neurologic disease, and infected pets are a source of infection for humans. The most common carriers in our area are skunks, raccoons and bats. Rabies is the single most deadly virus in the world, and because of this the vaccine is required by state law. Immunizations should be given 12 months after the initial vaccine, and boosted as recommended by the vaccine manufacturer.

Non-Core Canine Vaccines

Canine Parainfluenza Virus - This is one cause of the —kennel cough syndrome. Kennel cough is a mild upper respiratory disease that is very rarely life-threatening. The Parainfluenza vaccine doesn't block infection, but does help to lessen the clinical signs of the cough. Most commonly, this immunization is administered in a combination injection with Distemper, Parvovirus and Adenovirus-2.

Canine Bordetella Bronchiseptica - Just like Parainfluenza, this is a cause of kennel cough. And just like Parainfluenza, it does not block infection but does appear to lessen clinical signs. Dogs considered to be at risk (dogs who board often, or who participate in shows or competitions) may benefit from vaccination, followed by boosters at intervals in line with their risk of exposure.

Leptospirosis - Leptospirosis is a disease that has some prevalence in our area and can be spread to humans, but vaccinating against it is controversial for two reasons. First, there are multiple carriers for Lepto, and each carrier has a strain specific to its species—that is to say, contamination from a cow is different than contamination from a rat. The currently available vaccines do NOT contain all known strains, so there's no guarantee of protection. Secondly, if a dog does contract the illness, the vaccine may not prevent the shedding of bacteria into the environment. (Lepto is spread through contaminated urine.) Some breeders claim that Leptospirosis vaccines cause more reactions than other vaccines, but this is anecdotal and is not supported by veterinarians. Dogs at risk for exposure (hiking/swimming in areas with wildlife traffic, dogs frequenting parks) will likely benefit from the protection afforded by the vaccine.

Core Feline Vaccines

Feline Panleukopenia (FPV) - FPV is an often fatal disease found worldwide. The clinical signs of disease include coughing, sneezing, lethargy, poor appetite, vomiting, diarrhea and high fever. FPV can remain infectious in the environment for years. The immunity acquired from this vaccine is considered to be excellent and most vaccinated cats are well protected from disease. Adverse events associated with this immunization are rare. After their initial vaccine series, cats should be boosted every three years.

Feline Herpesvirus-1 (FHV-1) - FHV-1 is an important cause of upper respiratory disease (including coughing and sneezing) in cats. The disease is generally short lived, but cats can develop chronic symptoms. It is spread through cat-to-cat contact via eye, nose and mouth secretions. Infected cats often, if not always, become lifelong carriers of the disease. The vaccine is generally safe and should be boosted every three years.

Feline Calicivirus (FCV) - FCV is another cause of upper respiratory and oral disease in cats. It occurs worldwide and it is likely that all cats are exposed at some point. Recently, there have been some outbreaks of the disease with high death rates. FCV is spread in much the same way as Feline Herpesvirus-1. The vaccine is generally safe but in some cases, vaccinated cats develop minor and temporary upper respiratory symptoms. It's considered a core vaccine because some strains of the disease may be very dangerous.

Rabies Virus (RV) - Rabies is transmitted when the virus is introduced into cuts in the skin through bite wounds or onto mucous membranes from a potentially infected tissue. RV remains the most deadly virus in the world and the most serious agent transmissible between animals and people. In the United States, bats are the most common carrier of Rabies Virus. We use Purevax Rabies vaccine which is currently a yearly non adjuvanted vaccine made just for cats.

Non-Core Feline Vaccines

Feline Leukemia Virus (FeLV) - FeLV infects cats throughout the world and causes death through persistent immune system suppression. It's thought to be transmitted through the transfer of the virus in the saliva and secretions from the nose via grooming, biting, and sharing food and water bowls. Adverse events associated with this vaccine include local pain and swelling, lethargy, fever and scar tissue at formation at the injection site. It's only necessary for cats permitted outdoors, cats who reside with an FeLV positive cat, or cats in homes where the status of other cats is unknown. At this time, there's not enough evidence to support immunity beyond one year, so this vaccine should be given yearly.

Chlamydomphila Felis - This is a bacterial infection with worldwide distribution that causes inflammation of the conjunctiva (the membrane that lines the exposed part of the eye and inner surface of the eyelid). It is spread through direct cat-to-cat contact, and symptoms are usually seen 5-10 days after exposure. The vaccine can afford some protection from the development of the disease, but it does not prevent infection. If your cat is often in multi-cat environments where he or she might be exposed, annual revaccination is recommended. (NOTE: there is limited evidence that this organism may be transmitted between cats and humans and cause inflammation of the conjunctiva. Therefore direct contact with any eye, mouth or nose secretions should be avoided.)