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Vaccinations: A Word of Caution for Our Animals – Part III

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The Fallacy of Titer Tests

When a Little Knowledge can be Dangerous

There is a growing trend in veterinary medicine today as pet owners question the need for yearly vaccinations (see Parts 1 and 2 in this series). It is a trend to check an animal's titer to a vaccine on a yearly basis. A titer is a blood test that measures the amount of antibody in the blood to a given disease agent. So, for example, a parvo titer would show the amount of antibody against parvovirus that a dog has in her blood. Some diseases have been studied enough that scientists know what level of antibody protects against that disease, so this level is called a "protective titer." The problem with this approach is that low titers do not equate with lack of protection, especially the farther out in time the titer is measured from the original vaccination.

As was mentioned in parts one and two of this series, the practice of repeatedly vaccinating an animal is neither a necessary nor a healthy one. The evidence is strong that immunity persists for years or for life from vaccines early in life, and the risk of chronic illness is significantly increased with vaccine repetition. So, if someone runs a titer test in place of vaccinating Spot, and Spot's titer is low, perhaps 6-8 years after his last vaccine, the recommendation is likely to be "Spot needs another round of vaccines to keep him safe." I'd like to show that this is a wrong line of thinking that will get a lot of animals unnecessarily vaccinated, and therefore, at greater risk for developing chronic disease.

Immunity 101

The immune system is a wonderful and complex entity, made of many diverse parts, whose function is to decipher what is "self" and what is foreign. It involves a number of organs, among them the spleen, lymph nodes, tonsils, liver, thymus and bone marrow; and a whole host of white blood cells with exotic names like "natural killer cells," T-Helper cells, and macrophages that do amazing things to protect us (and our animals) against invaders. Many of these cells elaborate toxic chemicals that kill invaders by oxidation, or lyse them by punching holes in their membranes; other chemicals call in various immune cells and set up the all important inflammatory response that helps fight off the invader in general ways, like mounting a fever.

One somewhat functional division has been made by immunologists, whereby immunity is divided into two different components, called

- Humoral immunity
- Cell mediated immunity

The humoral immunity is that which is mainly effected by antibodies, large protein molecules that can engulf organisms and make them either inactive or more susceptible to immune cell attack. These antibodies originate from cells called B-lymphocytes, and are carried through the blood on the surface of these same cells. When a titer test is done, these antibodies are measured.

Cell mediated immune responses depend on a variety of cells called T-lymphocytes, macrophages, NK cells, etc. These are important not only in directly killing cancer cells or virally infected cells, but in communicating to other aspects of the immune system. This arm of the immune system can be studied, but typically the assays of its function are expensive and relegated to research labs. For instance, the activation of natural killer cells from a resting base level is measurable. This is not something the average consumer could afford to have done for an animal, however.

The immune system never uses only one of these parts to respond to a foreign invader; there is a holistic response, with overlap and communication between various cells, antibodies, and chemicals. The result of the grand, organized concert of a well balanced immune

response is that the animal stays healthy, free from foreign invaders, cancer cells, or self attack.

"You Must Remember This..."

The memory cells are worth a special mention. Originating from B-cells, these memory cells hold a memory of a previously encountered germ, like distemper, for instance. Whether they encountered this virus by natural exposure or by vaccination, memory cells are long-lived and have a specific memory about those foreigners they have encountered. If, years after the animal has been exposed to distemper virus, there is another exposure, these memory cells rapidly turn into plasma cells and secrete antibodies against the recognized virus. And these antibodies are measurable as a "rising titer." In fact, the diagnosis of distemper is often confirmed by a titer that rises at least four-fold from the beginning of the disease process to several weeks later.

How is titer testing a mistake? It only measures one fraction of the entire immune response, the antibodies produced against a particular organism. While their presence indicates protection, there is no reason for the immune system to keep producing antibodies against an invader forever, so, over time, these levels of antibody will wane. The fight is finished, there's no more invader showing up, so there's no need to keep a titer high. What is not measured by the titer test is any part of the cell-mediated immunity, especially the memory cells. So, while antibody levels will wane over time, these long-lived memory cells lie quietly in the recesses of the immune system, awaiting further signals that the invader is back. It is these cells that are responsible for the duration of immunity that cannot be measured by a titer test.

So, if you want to measure titers, do so intelligently. If you have vaccinated a puppy who may have been too young to respond to the vaccine, a titer test could tell you if a response is present. A previously vaccinated adult dog who has a gradually falling titer over the years very likely still has immunity from the memory cells, so don't forget that a titer test won't show this immunity. If you equate a low titer in a vaccinated adult with a lack of immunity, you could make a very costly mistake in your animal's health care, by vaccinating again. See [Vaccinations:Safety for the correlation between chronic disease and repeated vaccinations](#).

And if protection against invaders is your ultimate goal, rather than vaccinating repeatedly, you would do far better to strengthen the immune system. Transfer factor does this safely, simply, and surely, in all species of animals, including Homo sapiens. [www.Alt4Animals.com](#) has more information on dosing and use for your animals.

About the Author

Dr. Will Falconer, DVM, enjoys a full-time classical homeopathic practice in Austin, Texas. To learn what Dr. Falconer has been recommending to his clients on all matter of natural health care for years, visit [www.Alt4Animals.com](#).

He graduated with his Doctor of Veterinary Medicine degree from the University of Missouri in 1980 and has been in practice ever since. For the first seven years, he practiced very conventionally, using drugs and surgery to treat animals. Since then, he has gradually changed his practice style and philosophy to incorporate a more holistic approach to healthcare. He has taken certification training in veterinary acupuncture and veterinary homeopathy, and has received Certification as a Veterinary Homeopath from the Academy of Veterinary Homeopathy.

Dr. Falconer is a member of the American Holistic Veterinary Medical Association, the Academy of Veterinary Homeopathy, and the National Center for Homeopathy. He writes articles for national pet magazines and medical journals, gives public lectures to animal owners, and shares homeopathic case reports with conventional and holistic veterinarians. He enjoys a full-time classical homeopathic practice in Austin, Texas.