

Alternatives 4 Animal Health



Will Falconer, D.V.M.

Vaccinations

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Part I: Efficacy (or: Does it Work?)

Every procedure we do to ourselves or those in our care should be a useful one or there is no reason to do it. This may seem obvious, but bears mentioning, especially in the world of modern medicine. While vaccinations may confer immunity in animals, how effective or useful is it to repeat this procedure every year, as is the standard recommendation in this country today?

The Experts Speak

Immunology has recognized for a great many years that viruses confer a long-lived immunity. This is why your physician is not sending you postcards every year to repeat your small pox or polio vaccinations annually. They understand your immune system was adequately stimulated in childhood, and a cellular memory exists in you that will “wake up” if any future challenges from these viruses occur. Is there some profound difference in animals that makes us think they need to repeat their vaccinations yearly?

Let me quote from the experts. The following was printed in *Current Veterinary Therapy*, volume XI, published in 1992 (this is a very well respected, peer-reviewed book that is updated every four years). The authors are veterinary immunologists *Ronald Schultz (University of Wisconsin)* and *Tom Phillips (Scraps Research Institute)*.



"A practice that was started many years ago and that lacks scientific validity or verification is annual revaccination. Almost without exception there is no immunologic requirement for annual revaccination. Immunity to viruses persists for years or for the life of the animal..... Furthermore, revaccination with most viral vaccines fails to stimulate an anamnestic (secondary) response.... The practice of annual vaccination in our opinion should be considered of questionable efficacy..."

In plain English, that means you are wasting a lot of money (and, as we'll see later, risking your animals' health) without much likelihood that your animal is actually becoming “boosted” each year. In other words, the immunity that was established in early life persists, and it is that immunity that actually interferes with subsequent vaccinations. It's much like the case of vaccinating very young puppies. If you vaccinate a puppy (or kitten) at a too young age, the maternal antibodies from the mother's immune system are still present, and the vaccine will be thwarted in its attempt to provoke an immune response.

Types of Rabies Vaccines

I had the pleasure of meeting Dr. Schultz at a veterinary conference several years ago. He has done research for many of the companies that market vaccines. It was very interesting to hear his perspective of 25 years in this field. He clearly had not come to this understanding lightly. One most interesting fact was how rabies vaccine comes to be labeled. We currently have a “One-year rabies” and a “Three-year rabies” vaccine. On the labels, the one-year must be repeated yearly and the three-year must be repeated every three years. The two labels relate to the length of time the experimental animals were studied. At the end of one year after their vaccination, the animals were challenged with live rabies virus, the survivors tallied, and the vaccine marketed as “One-year rabies vaccine”.

The same vaccine was studied for three years, the data gathered, and this vaccine lot was marketed as “Three-year rabies vaccine.” Rabies vaccine is so effective in immunizing that there is likely life-long protection. Why then do some vaccinate annually? Unfortunately, we have laws in place that fail to recognize immunological facts. A handful of states still require annual rabies vaccination. In Texas and most US states all dogs and cats are required to be vaccinated triennially against rabies.

A Human Health Law for my Pet?

Now, let’s look at this law. Who puts it forth? In each state, the rabies law is made by the Department of Health, a human health governmental body. Why? It exists to protect the human populace against rabies. We learned many years ago that, if we had a large percentage of the pets vaccinated against rabies, the incidence of human rabies decreased substantially. This happens because pets are often the vector that deliver the rabies virus from the wildlife species where it has a reservoir (commonly in skunk, raccoon, fox, coyote, occasionally bats) to the people. If a skunk with rabies bites your dog and your dog gets rabies and then bites you, you can get rabies. Not a good scenario, as there is quite a high likelihood of fatality with this virus. But, if Spot is vaccinated against rabies and gets bitten by the same rabid skunk, Spot’s immunity rises to the challenge and wards off the infection. So, the vaccination of pets is clearly preventing people from getting rabies. But why require the vaccination yearly? Is there any evidence that the immunity wanes at day 364 (or at 3 years) and needs to be boosted? Clearly not. Duration of immunity studies are few, but the evidence is, as the immunologists stated above, that immunity likely lasts a lifetime.

So, useful questions to ponder when considering how you will interact with a law that can potentially harm your animal (see part 2) are:

- 1. Is my animal vaccinated against rabies already?*
- 2. If so, have I fulfilled the intent of the law to protect humans from my pet giving them rabies?*
- 3. If immunology shows a long lasting immunity to this viral vaccine, is it in my best interest or my pet’s best interest to continue following this law?*
- 4. Does anyone go door to door to check on my animals’ rabies vaccine status?*
- 5. If I choose not to vaccinate repeatedly any longer for rabies, am I putting my animal at risk if he bites someone?*

The last question is what may ultimately scare people into following a law that can make their animal chronically ill. But, my goal is to arm you with information so you can act reasonably rather than in fear. If your animal bites someone, can he be put to sleep so his head can be examined for evidence of rabies? That’s the idea that sends most people to get the revaccination. What a scary thought! So, what are the facts? A stray animal who has bitten a person, who has no owner and no proof of vaccination against rabies can, by law, be euthanized and have its head sent for examination to determine if rabies is present. Why? There is unfortunately no easier way to determine if an animal was incubating rabies at the time it bit someone. And, if the bitten person could die of rabies, time is of the essence, and the department of health wants to know if they need to begin the series of expensive injections that can prevent rabies in the bitten person.

But what about your animal biting someone?

If you have evidence that your pet has had a rabies vaccine sometime in his life, your animal is decidedly different than that stray dog. Yours is a vaccinated animal, and vaccinated animals are regarded differently. The worst case scenario for a known vaccinated animal is a quarantine of ten days, in which your animal may be taken to a kennel and caged for observation. Sometimes this quarantine even happens in your own home. If an animal has just bitten someone because of rabies, the incubation period of the virus is almost finished and other behavioral changes indicating rabies will show during this period of quarantine. In the absence of bizarre behavior typical of the rabid animal, your pet will be released after the period of observation, and you will be admonished to get the shots once again, be given a board bill for the time of quarantine, and potentially a fine, though I’ve not heard of that happening.

How Risky is Biting?

A common question I’m asked is, “Aren’t I liable if my animal bites someone and he’s not up to date with his rabies vaccination?” There are two very different areas of concern here, so the questions should be, “Am I liable if my animal bites someone?” and “Am I liable if my animal is not current on his rabies vaccines?”

So, the first question's answer is yes, you are liable if your animal bites someone. Your animal has caused injury and you own this animal and are responsible for its behavior. Whether you get sued for the damages is up to the injured party. But that has nothing whatsoever to do with your animal's last rabies vaccine. Are you less liable if your animal is up to date on his rabies vaccine? I can't imagine you would be. If someone needs medical care for wounds caused by your dog biting him, it's purely academic whether or not he's current on his rabies vaccine.

Are you liable if your animal has not stayed current with the law?

A qualified yes, here. Qualified because there's a statute somewhere that can be enforced against you, technically. But, practically speaking, who's going to know? Does anyone canvas the neighborhood asking to see current rabies vaccination certificates? Not in any municipality I've dealt with. But, let's say you're confronted by the animal control officials after your animal has bitten someone. Again, the worst case scenario, as long as you have proof of rabies vaccination at some time in the past, is a quarantine for observation. One has to weigh this risk against the risk of repeatedly vaccinating their pet (see [Part 2](#) to evaluate this risk). I can't make that decision for you. I can say that a great many of my clients, perhaps 90%, choose not to continue repeatedly vaccinating for rabies.

Then comes another question: "If I stop rabies vaccinations, how can I license my dog or cat?" Here again, you have to decide how important this is to you. Most of my clients don't license if this means they have to vaccinate time and again. And the most important tag to have on a collar is not a license tag: it is a tag that has your name and phone number on it.

How About Other Vaccines?

What about the other vaccinations? In dogs, cats, and horses the majority of what we vaccinate with are also viral vaccines, so there should be "no immunological requirement" for repeating them yearly. The one exception is the tetanus toxoid given to horses. This is not viral, but actually a bacterial toxin made into a vaccine. It may need to be repeated, but certainly not yearly. The immunity may lapse from this toxoid after 7-10 years and repetition will boost this kind of immunity. Also know that none of the others are required by law to be repeated. Some are even useless to give at any age, others at any age over one year.

A lot of what conventional medicine recommends is based on fear. If there's a "bad germ" out there that might "get us" (or our pets), we want to use something to protect against that germ. We've all heard horror stories about dogs dying of Parvovirus infection, so we are admonished to get yearly (or even twice yearly!) vaccinations against this deadly disease.

Yet how many adult dogs die of Parvo each year?

Ask your veterinarian this question. Parvo is almost always a disease of puppies under one year of age, and very occasionally old dogs who have weakened immune systems from unhealthy living (commercial diets and frequent vaccinations!). Why, then should we vaccinate against it yearly throughout life? Coronavirus also causes puppy diarrhea and vomiting, but differs from Parvo in that it is not fatal. Bordetella vaccines are given to prevent kennel cough. How efficacious they are is open to question, but more importantly, how serious is the disease? It's the canine version of a coughing cold in humans. Bothersome, but never fatal. Is it worthwhile injecting viruses into our animals for a disease from which they will surely survive? Dr. Schultz and others feel it is not. Yet this and other non-fatal viruses are in common use in every "annual (non-) booster" given.

But, We've Always Done it This Way (haven't we?)

You might ask why this annual vaccination habit exists. It's a very good question, and one that conventional medicine is examining more and more frequently as time goes on. Perhaps the weakest argument I've heard is the liability issue. Vaccines are labeled for yearly repetition, and a label must be followed, legally, by the user of the vaccine or drug. The argument states, if the vaccine interval is longer than a year, and the animal gets ill from a disease that was supposed to be prevented by the vaccine, the poor veterinarian could be sued. It's about as likely as the animal getting a vaccine-preventable disease after being vaccinated. It can happen, because no vaccine confers 100% immunity in those vaccinated. Far from it, in fact. So, law suit-happy people can sue for anything, but the odds are that an animal vaccinated properly with a virus vaccine will be as immune several years after the vaccination as it was when the one year anniversary came up.

And, if label following were the reason veterinarians feel compelled to vaccinate annually,

how about another very important part of the label, the part that states "Only for use in healthy animals?" See [Part 3](#) for this part of the argument.

A recent watershed occurred when a renowned University of California-Davis veterinary researcher and professor, Neils Pedersen, commented on the practice in a very well respected conventional magazine called *AAHA Trends* (*AAHA is the American Animal Hospital Association*).

"Current vaccine practices are medically unsound. It is time to question the wisdom of annual booster, multivalent products (combination vaccines, the most common being DHLPP for dogs and FVRCP for cats), and unnecessary vaccines. Doing so will return companion animals' immunization to its status as a medical and not an economical procedure."



Reality Check!

What will get us a lot closer to what we really want (healthy animals who are resistant to all disease) is to focus on raising our individual animals in the way that allows them to do what nature intended: to live freely, happily, and fully alive, with an immune system that responds directly to any challenge that confronts them. In our haste to protect our pets, let's not forget that it's the animal's [immune system](#) that protects, not some solution of viruses in a syringe.

In the second part of this article, I'll address another aspect of the vaccine question: safety. And in the third, the notion of titer testing in lieu of vaccinating.

For now, suffice it to say that if your dog or cat is an adult who has had vaccinations, there is no immunologic need to continue vaccinating annually: the immunity is present from the early vaccines and will not get any better through yearly repetition.



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Part II: Safety

If someone, even someone in a white coat, suggests that you take a drug or get injected with some substance, two logical questions ought to immediately arise in your mind:

1. *Is this beneficial to me (or does this work as intended)?*
2. *Is this safe?*

If we ask these two questions about annual revaccination of animals, and we ask the right people, we'll get a negative answer to both. We've already covered the first question in part I: efficacy of annual revaccination is clearly lacking according to immunologists. A more important question is the safety issue, as a growing body of evidence mounts showing a correlation between vaccinations and chronic disease.



Chronic Disease and Vaccination -- Look at the Timing

The chronic diseases have many names, including arthritis, hypo- or hyperthyroidism, allergies, asthma, inflammatory bowel disease, repeated ear infections, skin disease, heart disease, diabetes, kidney failure, and cancer.

What makes them nightmarish is that they linger, they are not easily cured, and they are slowly, progressively degenerative, meaning the patient declines in health over the time they are present. The best that conventional medicine can do with chronic disease is to control symptoms through suppressive therapies. This is fraught with problems, including side effects from the drugs, and apparently "new," more serious diseases arising from the continued course of suppression. So, our greatest goal as animal caretakers should be to prevent chronic disease in the first place.

The onset of chronic disease after vaccination is often delayed, coming about 1-2 months afterwards. This is not close enough for conventional medical minds to appreciate the correlation, but it's there nonetheless. The evidence of this comes from both anecdotal sources and research studies.

Allergic Skin Disease

A British veterinarian has, for the last 10-15 years, asked those clients who present him with an itchy, allergic dog, "When did this itchiness begin?" The response is striking. Some 75% remember clearly: it began within 1-2 months of the "puppy shots." Anecdotal evidence in human medicine is pointing to a cause and effect relationship between childhood vaccines and autism, virtually unknown a mere 40 years ago and now being called an epidemic. There has been a marked increase in incidence of this devastating disease that parallels the increased number of vaccinations now required of children. The interval between vaccination and disease? About one month. Asthma is following a similar course, as is diabetes.

Autoimmune Disease in Dogs

In a research study published in 1996, the authors looked at a deadly canine disease of a confused immune system. Known as immune-mediated hemolytic anemia (IMHA), it



means the dogs' immune systems attacked their own red blood cells as if they were foreign. Needless to say, this is life-challenging and the death rate is high, as one cannot live long without the oxygen-carrying red blood cells. In the study, 58 dogs with the illness, presenting at a veterinary teaching hospital over a two year period, were compared to a control group presenting for other problems over the same time. The question was asked, "Did anything precede the onset of IMHA?" Lo and behold, a highly statistically significant group of the sick dogs had been vaccinated with the usual yearly vaccines one month earlier. It was so highly statistically significant in fact that the authors entitled their paper, "Vaccine-Associated Immune-Mediated Hemolytic Anemia in the Dog." (Duval and Giger, J Vet Intern Med 1996;10:290-295)

Cancer in Cats

In cats, researchers have known since the early 90's about the correlation between vaccines and a malignant tumor. This particular tumor arises where the vaccines are commonly given, in the area of loose skin at the back of the neck, or in the back of the hind leg. It appears to be uniformly fatal, even with extensive surgery. And it has been clearly associated with two particular vaccines, rabies and feline leukemia. Finally, in 2000, recognizing the clear cause and effect relationship between vaccination and this cancer, the disease was renamed by the research community. It is now officially called Vaccine-Associated Sarcoma.

Autoimmune Disease in Cats


More recently, in work from Lappin, M.R. et al at Colorado State, it was revealed that the common feline vaccine viruses are grown in tissue cultures made from feline kidney cells. In harvesting the viruses to make the vaccine, feline kidney proteins come along and become part of the vaccine. So, in addition to making an immune response against the vaccine viruses, vaccinated cats are likely also producing antibodies against feline kidney cells. This may well explain why cats, as a species, have such a high rate of chronic renal disease, and often die of kidney failure. When examined microscopically, the kidneys of these cats are under attack by their own immune systems!

Homeopathic Practice Experience with Vaccinosis

In the early days of homeopathic veterinary practice, a number of us would see something we would later call the "vaccinosis phenomenon." It was instructive to us as to just how significant an impact vaccinations had had on our animal patients. We would be presented with a chronically ill animal, and after carefully choosing and giving the appropriate homeopathic remedy, we'd be met with disappointing results. A second or third prescription would be made with similar dismal responses from the patient. Finally, we'd go back to the owner and ask about vaccinations. Inevitably the patient was vaccinated. "Whenever we got the reminder postcard, we went in for the shots." Then we would reanalyze the case in light of this knowledge, and look at remedies that were particularly noted to have been applicable in illness that arose after vaccination. When we'd prescribe again with a "vaccinosis" remedy, the results were often startling. Not only would the disease symptoms lessen by 50% or more, but the patient would start acting more normally. The dog who was hyperactive would settle down and pay attention, the angry cat would become a lover again, or the animal terrified of visitors would come out and say hello. The owners were so impressed with the changes that they would often call before the next appointment to tell us how great things were going!

The inference we have made from this experience, repeated over and over in different parts of the country in different practitioners' hands, is simple: vaccinations are responsible for a significant portion of the illness we see in the patients with chronic disease.

The veterinary profession slowly continues to evaluate this practice of vaccinating annually. In 2000, the American Association of Feline Practitioners came out with an official statement against annual vaccination in the cat. They based this position on research from Cornell where kittens, vaccinated once, measured *seven years later* still showing evidence of immunity from those vaccines. Veterinary schools across the country are currently reevaluating their recommended



vaccination protocols. Quite frankly though, I don't think we can afford to wait for the whole profession to catch up. Our animals are at risk to become chronically ill if we continue this baseless practice of annual revaccination. And, years from now when we look back incredulously at how such a practice was ever thought to be wise, wouldn't it be nice to be able to smile and pat your healthy twenty-something pet and say, "We knew. We stopped. That's why you're still here."



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Part III: Your Very Own Waiver

Did you know that, even if you get a postcard saying your animal's rabies vaccination is now due, that many times, you have an automatic waiver in place that even your veterinarian may overlook? It's true. It's called the label on every drug and vaccine, including rabies vaccines.

If you read the label on a vaccine from any manufacturer, it will inevitably say, "Only for use in healthy dogs, cats, ferrets, etc" See that "healthy" word? It can be your automatic waiver. The Food and Drug Administration (FDA) approves all drug labels, which include indications (what diseases it's to be used for), species, dosage, method of administration, etc. As a practicing veterinarian, one is bound to follow the label on any drug or vaccine, unless s/he feels it's in the patient's best interest to prescribe "offlabel." The FDA has refused to regulate the practice of medicine, so you may not have any legal recourse to fall back on, but that shouldn't stop you from questioning your veterinarian if you are called on to vaccinate an animal who is clearly out of the realm of "healthy."



I have almost stopped cringing when clients tell me of bringing their pet into their conventional veterinarian for a complaint (fever, poor appetite, skin disease, etc.) and the vet, noticing that the due date has arrived for vaccinations, gives the vaccine to the suffering animal! Did that veterinarian really, in his/her best judgement, feel that this ill animal would benefit from a vaccination at this time? I make note of it in the records, because, more often than not, the animal's illness gets worse from this point onwards. As a homeopathic veterinarian, I know I have to factor this in if I am to cure this patient.

So, what makes your animal an "off-label" or possibly exempt case for an annual or semi-annual vaccination? Here are some common examples:

- Hypothyroid dogs on a daily thyroid replacement drug.
- Allergic animals who scratch or chew themselves frequently.
- The same itchy animals above who are on meds like antihistamines, prednisone, or the latest in the wave of immune suppressants, cyclosporine (Atopica).
- The same previously itchy animals who are being controlled with special diets that have unusual ingredients (duck, pea, venison, trout, "novel proteins," etc).
- Any animal on a special diet for kidney disease, bladder crystals, liver disease, intestinal problems (like Inflammatory Bowel Disease), dental disease, or any other reason.
- The dog or cat who routinely needs ear medications to prevent infections or itchy, swollen, discharging ears.
- Any animal who is on a seizure medicine to control epilepsy (I still cringe when I hear these poor guys getting vaccinated. I can't help it. **This is so wrong**).
- The dog with "dry eye" who is on drops (often of cyclosporine) to keep the eye moist because his tear ducts have autoimmune inflammation that prevent them from making tears.
- A hyperthyroid cat, on medicine or after radioactive iodine treatment, to treat another immune

disorder, this one causing his thyroid to over produce thyroid hormone.

- Any animal on heart medications.
- Any animal on pain medications.
- Any diabetic animal, whether or not insulin is being used.
- Any animal on antibiotics.

Hmmm, do you see the pattern I see here?
ON MEDICATIONS = NOT HEALTHY.

- Any animal who you are bringing in to the vet because s/he has the “ADR Syndrome.” That’s “Ain’t Doin’ Right.”

Think about this last one for a minute. It should be obvious, but it’s often missed. If you have called your veterinarian to schedule an exam to find out what’s wrong with your dog or cat or horse, this animal is, with or without a diagnosis being reached, not “healthy,” right? That’s precisely why you are at the veterinarian’s office. So, even before you go in, you should be mentally prepared to say “NO” to vaccinations, knowing what you now know about the label on every vaccine. Whether Miss Kitty is “due” or not, or whether the law has some opinion on the matter of rabies vaccinations, you have the right, as that animal’s caregiver, to refuse to allow vaccination on the spot. “I’m sorry, but this animal is not well, and therefore, should not receive a vaccine today,” is a very reasonable response. A simpler one is just: “I’d like to wait on that for now.”

And here’s the unfortunate but true nugget in this discussion: ***it ultimately must be you who makes this decision not to vaccinate.*** I have heard way too many stories of ill animals being vaccinated to think you can entrust that decision to your veterinarian.

Of course, this points to the even broader area of: who is responsible for your animal's health? Those who hand that responsibility over to the White Coats are probably not even reading this site, but maybe it’s time to consider that you are really the one who needs to steer the course for this animal in your care. I’m mostly speaking of prevention here. The choices you make for prevention may be better ones than those promulgated by conventional veterinarians. That’s why this site is here.

So, take a stand if your animal is not well, and you are faced with people wanting to vaccinate “off label”. You will do this animal a huge favor, and you have no less than the FDA on your side.

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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 if measured several years after 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 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.

An Incomplete Test

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.

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.
