

How Often Should You Vaccinate Your Cat or Dog?

With mortality rates from disease as high as 80%, you must know what's really essential and which vaccines are alright to skip, especially for indoor-only cats. Find out why some vaccinations don't truly immunize and protect your pet ... and what to do instead.

Analysis by Dr. Karen Shaw Becker

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STORY AT-A-GLANCE

- In part 1 of this 4-part series, Dr. Becker talks with Dr. Ronald Schultz, a pioneer and expert in the field of veterinary vaccines. Listen as the doctors discuss the history of dog and cat vaccines, and the real reason behind why your puppy or kitten receives so many vaccines in the first year of life

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Today I'm interviewing a very special guest at his facility, Dr. Ronald Schultz, Professor and Chair, Department of Pathobiological Sciences, School of Veterinary Science at the University of Wisconsin – Madison.

Some Background on Dr. Schultz

Dr. Schultz has been at University of Wisconsin – Madison for 29 years.

He explained there are about 150 faculty staff and students in his department, which is one of the four largest departments at the university, and a very important element of any veterinary school. The Department of Pathobiological Sciences is involved in a variety of scientific subjects, including bacteriology, immunology, virology, parasitology, public health, epidemiology and clinical and anatomic pathology.

Dr. Schultz's specialty is veterinary immunology. One of the reasons I'm excited to interview him for MercolaHealthyPets.com is because as readers here learn to make better decisions about vaccinating their pets, they will undoubtedly come across Dr. Schultz's name and his work in the field.

The doctor is involved in every aspect of the topic of veterinary vaccines – he has worked alongside vaccine manufacturers, developed vaccination protocols, and tested protocols.

Dr. Schultz is a hands-on researcher in the field of veterinary vaccines, and it's an honor to be able to speak with him today.

A Little Veterinary Vaccine History

Vaccination is one of the most hotly debated topics in veterinary medicine today. The reason is because while on the one hand we want to protect companion animals from deadly infectious diseases, we are also very concerned with the problems created by over-vaccination.

When humans are vaccinated against diseases like measles, mumps, rubella and DPT, the immunizations given in childhood provide lifetime protection. They are not given again in that child's entire life, much less repeated every year.

When I worked at a humane society 20 years ago, our protocol was to give puppies a five-way combination vaccine at 6, 8, 10, 12, 14 and 16 weeks, followed by an annual booster every year for the rest of their lives.

When I got to veterinary school and learned vaccines never wear off, I became quite confused about why vets recommend yearly re-vaccinations. So I asked Dr. Schultz how dogs and cats develop immunity.

Dr. Schultz explained that my questions were the same ones he asked back in the 1970s – how often do dogs and cats need to be vaccinated, and what vaccines are really required?

In the 1970s there weren't a lot of vaccines available for pets, so according to Dr. Schultz, every time a new one became available, it was added to the syringe.

By the 1980s, there were 12 or 14 different vaccines being delivered as combination products. As an immunologist, Dr. Schultz knew that was not a good idea. And vaccinated pets were beginning to develop adverse reactions, so their bodies also knew the combination vaccines were a bad idea.

In 1978, Dr. Schultz and a colleague, Dr. Fred Scott developed and published a vaccination protocol. It called for pets to receive puppy or kitten shots, be vaccinated again at a year of age, and then be re-vaccinated every three years or less frequently thereafter.

Change is often a very slow process, and it wasn't until 1998 that the American Association of Feline Practitioners issued guidelines very similar to what Dr. Schultz and Dr. Scott published 20 years earlier.

Core vs. Non-Core Vaccines

There are a lot more vaccines available today than there were back in the 1970s, but we now know there are certain vaccines, called the 'core vaccines,' that every dog and cat should receive.

Canine core vaccines include:

- Distemper
- Parvo
- Adenovirus
- Rabies

Feline core vaccines:

- Panleukopenia
- Calici
- Herpes
- Rabies

The diseases these vaccines protect against are very serious, with mortality as high as 60% to 80% in young animals. That's why every kitten and puppy should receive these core vaccines very early in life.

All other vaccines are known as non-core, or optional. Only certain animals need non-core vaccines, as opposed to every animal needing the core vaccines.

I next asked Dr. Schultz for his thoughts on what vaccines are necessary for indoor-only cats that never come into contact with outdoor cats.

Dr. Schultz recommends only the core vaccine panleukopenia for indoor kitties. He explained the last dose should be at 14 to 16 weeks, because by that time the kitten will no longer have the protection passed from the mother cat.

Litters from immunized cats and dogs have some protective antibodies from their mothers at birth. These antibodies are systemic, but they have a finite life. They ultimately die off, but the level of immunity in the mother determines when that die-off occurs in the kittens or puppies. It is only when the antibodies from the mother die off that a vaccination actually immunizes the puppy or kitten.

Vaccination vs. Immunization

I asked Dr. Schultz to expand on the difference between being vaccinated and being immunized. According to Dr. Schultz, and I certainly agree, we tend to do a lot of vaccinating, but at times we don't do much immunizing – especially when it comes to kittens and puppies.

The maternally-derived antibodies passed to puppies and kittens can actually block vaccines from working. It's one of the reasons we give a series of vaccines to young animals.

In the 1960s and 1970s when we first started using vaccines, vets would create a nomograph for litters to determine when they could be effectively vaccinated. The nomograph was based on the antibody titers of the mothers. Using half-life to predict when the mother's antibodies would wear off in her babies, we could determine exactly when the puppies or kittens should be immunized. Maternally-derived antibodies wear off between about five and a half and nine weeks.

The time period between when the maternal antibodies die off and the baby's immune system is strong enough to protect it provides a window of opportunity in which if the puppies or kittens are exposed to a virus it can kill them.

The purpose of vaccines is to stimulate the immature immune system to make antibodies so if in the event a puppy or kitten is exposed to an infectious disease, it will be able to mount an immune response to fight it off.

The beauty of the nomograph is it provides the information needed to vaccinate a puppy or kitten only once, because it predicts pretty much exactly when the litter will no longer be protected by maternal antibodies. This allows you to give the kitten or puppy the correct vaccines at the appropriate times, and avoids giving unnecessary vaccines.

A drawback to use of the nomograph method is that it takes a fair amount of time to get the results. Another drawback is the maternally derived antibodies for the various viruses die off in the puppy or kitten at different times. For example, a puppy might respond to distemper at 8 weeks, but not to parvo until 12 or 14 weeks.

If you work with a holistic vet that uses single vaccines, this is a perfect way to custom formulate an ideal vaccine schedule, however, the majority of people don't, and that's why the puppy or kitten series of vaccinations became popular – there was no waiting and it was much less expensive as compared to titering.
