Schultz: Dog vaccines may not be necessary

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Once a year, Ronald Schultz checks the antibody levels in his dogs' blood. Why? He says for proof that most annual vaccines are unnecessary.

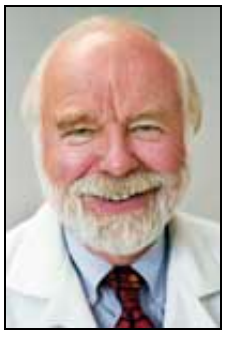
Schultz, professor and chair of pathobiological sciences at School of Veterinary Medicine, has been studying the effectiveness of canine vaccines since the 1970s; he's learned that immunity can last as long as a dog's lifetime, which suggests that our "best friends" are being over-vaccinated.

Based on his findings, a community of canine vaccine experts has developed new veterinary recommendations that could eliminate a dog's need for annual shots. The guidelines appear in the March/April issue of Trends, the journal of the American Animal Hospital Association (AAHA).

Every year, when we take our dogs to the veterinarian's office, they could receive up to 16 different vaccines, many of which are combined into a single shot. Four of these products protect against life-threatening diseases, including rabies, canine parvovirus type 2 (CPV-2), canine distemper virus (CDV) and canine adenovirus type 2 (CAV-2); the rest protect against milder diseases to which only some dogs are exposed, including Lyme disease.

But, as many veterinarians are realizing, over-vaccination can actually jeopardize a dog's health and even life. Side effects can cause skin problems, allergic reactions and autoimmune disease. Though the case in cats, not dogs, tumors have been reported at the site of vaccine injections.

A veterinarian prepares to administer a canine vaccine to a dog at the School of Veterinary Medicine Clinic. Research by Ronald Schultz, professor and chair of pathological sciences in the School of Veterinary Medicine, questions whether current vaccination guidelines are causing our pets to be unnecessarily over-vaccinated. (Photo: Jeff Miller)



Schultz

"These adverse reactions have caused many veterinarians to rethink the issue of vaccination," says Schultz. "The idea that unnecessary vaccines can cause serious side effects is in direct conflict with sound

medical practices."

For 30 years, Schultz has been examining the need to vaccinate animals so often and for so many diseases. "In the 1970s, I started thinking about our immune response to pathogens and how similar it is in other animals," says Schultz. "That's when I started to question veterinary vaccination practices."

Just like ours, a canine's immune system fires up when a pathogen, like a virus, enters the body. The pathogen releases a protein called an antigen, which calls into action the immune system's special disease-fighting cells. Called B and T lymphocytes, these cells not only destroy the virus, but they remember what it looked like so they can fend it off in the future.

It's this immunological memory that enables vaccines, which purposely contain live, weakened or dead pathogens, to protect against future disease.

But, as Schultz points out, vaccines can keep people immune for a lifetime: we're usually inoculated for measles, mumps and rubella as children but never as adults. So, can dogs be vaccinated as pups and then never again?

While evidence from Schultz's studies on both his own dogs and many other dogs from controlled studies suggests the answer is yes, Schultz recommends a more conservative plan based on duration of immunity and individual risk.

Schultz says that core vaccines, or the ones that protect against life-threatening disease, are essential for all dogs, yet he does not recommend dogs receive these shots yearly. "With the exception of rabies, the vaccines for CDV, CPV-2 and CAV trigger an immunological memory of at least seven years," he explains. (Studies testing the duration of immunity for rabies shots show it lasts about three years.)

For these reasons, Schultz suggests that dogs receive rabies shots every three years (as is required by law in most states) and the other core vaccines no more frequently than every three years.

Some non-core vaccines, on the other hand, have a much shorter duration of immunity, lasting around one year. But, as Schultz points out, not every dog should get these types of vaccines, because not every dog is at risk for exposure.

Today, many vaccinated dogs receive a shot for Lyme disease. However, Schultz says that the ticks carrying the Lyme disease pathogen can be found in only a few regions of the United States. More importantly, Schultz adds, "The vaccine can cause adverse effects such as mild arthritis, allergy or other immune diseases. Like all vaccines, it should only be used when the animal is at significant risk." He notes that the Veterinary Medical Teaching Hospital at the UW-Madison School of Veterinary Medicine rarely administers the Lyme disease vaccine.

Another common vaccine that Schultz says is unnecessary protects against "kennel cough," an

often mild and transient disease contracted during boarding or dog shows. "Most pet dogs that do not live in breeding kennels, are not boarded, do not go to dog shows and have only occasional contact with dogs outside their immediate family," Schultz recommends, "rarely need to be vaccinated or re-vaccinated for kennel cough."

Schultz says that it's important for veterinarians to recognize an individual dog's risk for developing a particular disease when considering the benefits of a vaccine. "Vaccines have many exceptional benefits, but, like any drug, they also have the potential to cause significant harm." Giving a vaccine that's not needed, he explains, creates an unnecessary risk to the animal.

Recommending that dogs receive fewer vaccines, Schultz admits, may spark controversy, especially when veterinarians rely on annual vaccines to bring in clients, along with income.

But, as he mentions, annual visits are important for many reasons other than shots.

"Checking for heartworm, tumors, dermatological problems and tooth decay should be done on a yearly basis," he says. "Plus, some dogs, depending on their risk, may need certain vaccines annually." Rather than vaccinating on each visit, veterinarians can use a recently developed test which checks dogs' immunity against certain diseases.

Schultz adds that veterinarians who have switched to the three-year, instead of annual, vaccination program have found no increase in the number of dogs with vaccine-preventable diseases.

"Everyday, more and more people in the profession are embracing the change," notes Schultz. And, that the new vaccination guidelines supported by the AAHA, along with the task force members representing the American Colleges of Veterinary Internal Medicine, Veterinary Microbiology and the American Association of Veterinary Immunologists, is evidence of just that.
