

Learning to Cope With Big Bad Bugs

Vaccine study finds coughing increases with longer kennel stays

A recent placebo-controlled study of two bordetella vaccines' effectiveness within the shelter setting (*Preventive Veterinary Medicine*, Vol. 62, 2004) found little difference between the cocktails, but the report did indicate that the strongest predictor for coughing in shelter dogs is the length of time animals spend in a facility.

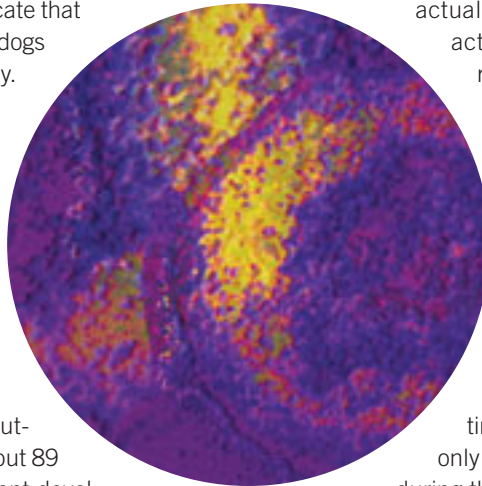
In 2000, healthy dogs entering the Tippecanoe County Humane Society in Lafayette, Indiana, were treated to one of three vaccines: an intranasal vaccination containing *B. bronchiseptica* and canine parainfluenza, an intranasal that also contained canine-adenovirus type 2, or an intranasal placebo. Dogs were then observed for signs of kennel cough during their time at the shelter and after adoption.

There were no substantial differences in outcome between the active vaccine groups. About 89 percent of the dogs did not cough; 5.4 percent developed a cough while still in the shelter and 6 percent developed a cough post-adoption. The researchers noted that the overall low

incidence of coughing precluded observation of differences in vaccine effectiveness.

Oddly, the incidence of coughing post-adoption was actually higher for the dogs who had received active vaccines than for those who had received the placebo. But, researchers noted, for all three groups, the incidence of coughing was higher in the period that began three days after vaccination than it was in the first three days afterwards. "This suggests that adverse effects associated with the use of intranasal vaccines are minimal and do not contraindicate their use in shelters," the researchers wrote.

Across the board, however, the length of time a dog had spent at the shelter was "the only significant prognostic factor for coughing during this trial," the researchers wrote, "with a 3 percent increased risk of coughing for each day spent at the shelter."



Disease study finds shelters aren't the root source of viruses—but certainly help them along

Cats don't necessarily get feline calicivirus (FCV), feline herpesvirus (FHV), or feline enteric coronavirus (FECV) from their stay at an animal shelter, a recent study published in the *Journal of Feline Medicine and Surgery* (Vol. 6, Issue 2, 2004) found. But the shelter environment provides an ideal setting for animals already shedding these viruses to spread them.

The authors of "Common virus infections in cats, before and after being placed in shelters, with emphasis on feline enteric coronavirus" examined healthy, non-feral cats coming into several California animal care and control facilities.

The authors had a particular interest in finding out how many animals were already shedding viruses at the time of relinquishment and in assessing how long it took for other animals to become infected. They also wanted to see how the shelter environment would affect the level of virus shedding.

Of the cats examined, 11 percent were shedding FCV upon admission, 4 percent were shedding FHV, and 33 percent were shedding FECV. "Exposure to all three viruses was rapid and efficient once cats entered the shelter environment," the researchers wrote: One week after entry into the shelter, 15 percent were shedding FCV, 52 percent FHV, and 60 percent FECV.

The enormous jump in shedding of FHV was much greater than expected, but the researchers noted that the virus spreads very efficiently from cat to cat, and every cat who's been infected in the past is a potential carrier. "Stresses as simple as moving a cat into a new environment can convert latent to active infections in a few days. ... The marked increase in virus shedding after only 1 week clearly demonstrates why FHV is one of the most important causes of disease in shelter environments," the authors wrote.

The researchers concluded that while

the shelter was not the root source of the viruses discovered, the environment of the shelter appeared to be highly conducive to the spread of the viruses. Such infections, they noted, have immediate and long-term consequences for shelters: "Acute disease is the most obvious problem for shelters, while chronic disease is largely a problem for cats that have been adopted into homes."

Commenting on the study, UC Davis veterinarian Kate Hurley noted that the facilities examined are "fairly typical of a large municipal shelter that houses cats in single cages with a lot of swapping around for cleaning." (For recommended cleaning protocols and ideas on innovative cat housing, see "Disinfection Connection" in the Jul-Aug 2003 issue and "Outbreak of Drug-Resistant Salmonella" in the Nov-Dec 2004 issue; both are available at www.AnimalSheltering.org.)

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