

LEPTOSPIRA VACCINE--Adverse Reactions

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Regarding the Lepto vaccine, on Page 2 of the American Animal Hospital Association's 2003 Canine Vaccine Guidelines and Recommendations, it states that "Optional or 'noncore' vaccines are those that the committee believe should be considered only in special circumstances because their use is more dependent on the exposure risk of the individual animal. Issues of geographic distribution and lifestyle should be considered before administering these vaccines. In addition, the diseases involved are generally self-limiting or respond readily to treatment. The committee believes this group of vaccines comprises distemper-measles virus (D-MV), canine parainfluenza virus (CPIV), *Leptospira* spp., *Bordetella bronchispetica*, and *Borrelia burdorferi*."

Furthermore, on Page 7, Tables 1 of the AAHA Guidelines referenced above, it states under Revaccination (Booster Recommendations) that the *Leptospira interrogans* vaccine "...this product carries high-risk for adverse vaccine events." Under Overall Comments and Recommendations they elaborate: "Anecdotal reports from veterinarians and breeders suggest that the incidence of postvaccination reactions (acute anaphylaxis) in puppies (<12 wks of age) and small-breed dogs is high. Reactions are most severe in young (<9 wks of age) puppies. Routine use of the vaccine should be delayed until dogs are >9 wks of age."

On Page 8 of the 2006 American Animal Hospital Association's Canine Vaccine Guidelines, it states that "Veterinarians are advised of anecdotal reports of ACUTE ANAPHYLAXIS in TOY BREEDS following administration of leptospirosis vaccines. Routine vaccination of toy breeds should only be considered in dogs known to have a high exposure risk."

Leptospira is a "killed" vaccine and is associated with clinically significant adverse reactions. According to the 2003 AAHA Guidelines (Page 16), "...killed vaccines are much more likely to cause hypersensitivity reactions (e.g., immune-mediated disease)." Further, the AAHA task force reports on Page 18 that, "Bacterial vaccines, especially killed whole organism productsare much more likely to cause adverse reactions than subunit or live bacterial vaccines or MLV vaccines, especially if given topically. Several killed bacterial products are used as immunomodulators/adjuvants. Thus, their presence in a combination vaccine product may enhance or suppress the immune response or may cause an undesired response (e.g., IgE hypersensitivity or a class of antibody that is not protective)."

A fuller discussion of the Lepto vaccine can be found on Page 14, in which it is reported that, "Immunity is an ill-defined term for *Leptospira* spp. products. If immunity is defined as protection from infection or prevention of bacterial-shedding, then there is little or no enduring immunity."

Dr. Alice Wolf, Professor of Small Animal Internal Medicine at Texas A&M College of Veterinary Medicine, stated in an address (Vaccines of the Present and Future WSAVA 2001 - Vaccines of the Present and Future) at the 2001 World Small Animal Veterinary Association World Congress that: "The most reactive vaccines for dogs include leptospirosis bacterin and *Borrelia* [Lyme]vaccine."

On Page 18, the task force declares: "However, the ethical issue that our profession struggles with today is whether economics justifies giving an animal a drug (vaccines are biologic drugs) that is not necessarily required. As a minimum, we should allow pet owners to make this choice rather than make it for them."