

Over-vaccination: Are vets making our pets sick?

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Disclaimer: The purpose of this article is to provoke discussion to aid in effecting change to current dog and cat annual and triennial revaccination protocols. Concerned pet owners are encouraged to do their own research on this topic to support any decisions regarding revaccinating their pets.



For the latest international guidelines on core and non core (e.g. bordetella and parainfluenza) vaccines, refer to the World Small Animal Veterinary Association Dog and Cat Vaccination Guidelines: http://www.wsava.org/PDF/Misc/VGG_09_2007.pdf

The author's interest in this subject was initiated after her own dog, Sasha, an eight year old Maltese x Silky terrier, became mysteriously ill with haemorrhagic gastroenteritis (i.e. "bloody diarrhea") a week after her last booster revaccination, and was subsequently put to sleep. The veterinarian was unable to provide an explanation for Sasha's illness, but refused to consider it could have been a delayed adverse reaction to revaccination.

Many veterinarians are ignoring dog and cat vaccination guidelines issued by the World Small Animal Veterinary Association (WSAVA), and are continuing to send unsolicited reminder letters compelling pet owners to have their pets unnecessarily revaccinated for diseases such as parvovirus, distemper virus and adenovirus. There is no scientific evidence that ongoing annual or triennial revaccination for these diseases is necessary. **This unethical practice of over-vaccination is of no benefit to the animal and puts it at needless risk of a range of adverse reactions, including death.**

In many instances, pet owners are not being informed that there is long duration of immunity, probably life-long, after vaccination with modified live virus (MLV) core vaccines, which means ongoing revaccination is unnecessary. **They are also not being informed that experts warn that vaccination should be minimised to reduce**

the risk of adverse reaction to vaccine products.

Conscientious and caring veterinarians are trying to raise the alarm about the ramifications of this unethical practice, but their warnings are often unheeded. **The veterinary profession faces a loss of credibility when pet owners discover crucial information about duration of immunity, and possible adverse reactions, has been withheld from them for years.**

The consequences of over-vaccination for pet owners and their pets are significant. If an animal becomes sick, or worse, after unnecessary revaccination, **the pet owner bears the emotional and financial cost, which in some cases can be considerable.**

Pets are currently being exposed to needless and often unidentified risk. Due to inadequate testing of vaccine products, the full range of immediate and delayed adverse reactions to vaccination is unknown. Many breeds of dogs may be more vulnerable to adverse reaction to vaccination. **Recent studies warn that small-breed dogs in particular are at greater risk of adverse reaction with multivalent vaccines.** It is unknown what potentially damaging cumulative effects frequent revaccination might incur over the life of an animal.

Post-marketing surveillance of adverse reactions is poor. The WSAVA guidelines note that **"there is gross under-reporting of vaccine-associated adverse events which impedes knowledge of the ongoing safety of these products"**. Reporting is voluntary, and veterinarians appear reluctant to report adverse reactions. Adverse reaction information derived from post-marketing surveillance is also not routinely required on vaccine product labels.

Veterinary expert Dr Jean Dodds warns that adverse reactions can occur up to 45 days after vaccination. Professor Ronald Schultz, a member of the WSAVA Vaccination Guidelines Group and AAHA Canine Vaccine Task Force, notes that **adverse reactions can range from mild, self-limiting illness to chronic disease or death.** Post-vaccination neurologic disorders, immunosuppression, dermatologic abnormalities, and other problems have been demonstrated to occur after administration of canine and feline vaccines. The most common signs of local reactions are facial edema, hives and itching. Signs of a systemic reaction include urination, vomiting, diarrhea (sometimes bloody), dyspnea and collapse. Pain, soreness, stiffness, lethargy, swelling, a persistent lump, irritation, hair loss and/or colour change of hair at the injection site have also been observed as common reactions. Change of behaviour has also been reported after vaccination.

Bioethicist Professor Bernard Rollin warns there is increasing evidence that over-vaccination can actually be conducive to disease development. For example, frequent vaccination has been implicated in the development of autoimmune hemolytic anemia in dogs and injection-site sarcomas in cats, both of which can be fatal.

Could over-vaccination also be a cause of cancer in dogs? Cancer is reported as being the single biggest cause of death in dogs over two years old. According to information from Texas A&M University, dogs and cats have a higher incidence of many tumors than do humans. Dogs have 35 times as much skin cancer, 4 times as many breast tumors, 8 times as much bone cancer, and twice as high an incidence of leukemia as do humans.

A paper published in the British Journal of Cancer in 2001 suggests long-term over-activation of the immune system could be a major cause of cancer. This research refers to cancer in humans, but is also relevant to other mammals. **Could over-vaccination, and the constant assault on the immune system, be causing a variety of cancers in dogs and cats over the long term?** It is certainly something to consider, especially as the scientific literature records the problem of injection site sarcomas in cats. This possibility is also another reason to cease unnecessary revaccination of animals.

The stunning fact is, adult dogs simply don't need to be regularly revaccinated with MLV core vaccines. **When adult dogs are revaccinated with these vaccines they are undergoing risk for no benefit.**

The WSAVA guidelines note that dogs properly vaccinated with MLV core vaccines for parvovirus, distemper virus and adenovirus have very high protection from infection and $\geq 98\%$ protection from disease. The WSAVA guidelines Fact Sheets advise that duration of immunity after vaccination with these vaccines is seven years or longer, based on challenge and serological studies. The guidelines note that **"dogs that have responded to vaccination with MLV core vaccines maintain a solid immunity (immunological memory) for many years in the absence of any repeat vaccination"**.

Earlier vaccine guidelines issued by the AAHA Canine Vaccine Task Force in 2003 note that MLV vaccines are likely to provide lifelong immunity, stating **"when MLV vaccines are used to immunize a dog, memory cells develop and likely persist for the life of the animal"**.

Professor Ronald Schultz, a renowned expert in immunology, says that if a puppy is immunized with the three MLV vaccines to prevent parvovirus, distemper virus and adenovirus **"there is every reason to believe the vaccinated animal will have up to life-long immunity"**. Schultz advises that puppies should be revaccinated at one year of age with the vaccines used earlier. After that he does not believe there is any immunologic need to revaccinate annually with these vaccines. He notes that annual vaccination significantly increases the risk of an adverse reaction.

Veterinarians use **unproven** vaccine product label revaccination recommendations to try and justify over-vaccination with core MLV vaccines. But these revaccination recommendations are arbitrary and have no scientific basis. This fact is well-known in the international veterinary community, after the alarm was raised in an

article titled "Are we vaccinating too much?" published in the *Journal of the American Veterinary Medical Association* in 1995. This article acknowledged that there was little scientific documentation to back up vaccine product label claims for annual revaccination, noting that many vaccines would "last for years".

In 2002, an American Veterinary Medical Association report warned that *"unnecessary stimulation of the immune system does not result in enhanced disease resistance and may expose animals to unnecessary risks"*. In 2003, the AAHA Canine Vaccine Task force compromised on a move from annual revaccination to revaccination every three years with vaccines for parvovirus, distemper virus and adenovirus. In 2006, the AAHA Canine Vaccine Task Force revised its revaccination recommendation to every three years *or longer*. To minimise the potential for adverse reactions to vaccine products, the 2007 WSAVA guidelines specifically warn that core vaccines *should not be given any more frequently* than every three years after the 12 month booster injection following the puppy/kitten series.

In the United States, the veterinary community compromised on a triennial revaccination recommendation. *But, like annual revaccination, there is no scientific evidence that even triennial revaccination is required to ensure continuity of protection*". In 2006, the AAHA canine vaccine guidelines advised that vaccines produced by the major biologics manufacturers against parvovirus, distemper virus and adenovirus *all produce excellent immune responses and can be soundly and reliably administered at the discretion of the clinician in extended duration of immunity protocols*. It is not necessary to use a designated "3 year vaccine" and it is not necessary to revaccinate "every three years". *Immunological memory does not automatically "switch off" after one or three years, so how can unnecessary ongoing revaccination be justified?*

In 2007, the WSAVA Dog and Cat Vaccination Guidelines were launched before its annual international Congress held in Sydney, Australia that year. During the Congress, Associate Professor Steven Holloway, Head of Small Animal Medicine at the University of Melbourne, warned *it is not possible to defend the practice of annual revaccination for parvovirus, distemper virus and adenovirus, given the volume of data available*.

Unaccountably, it seems many Australian vets ignored the WSAVA vaccination guidelines and Dr Holloway's admonishment, as the practice of annual revaccination continues here today. Ongoing unnecessary revaccination is even supported by the regulatory authorities, e.g. the State Veterinary Surgeons' Board of SA *"strongly recommends"* that boarding kennels require proof of annual revaccination of pets for parvovirus, distemper and hepatitis (adenovirus).

In its recent draft vaccination policy (dated March 2009), *the Australian Veterinary Association admitted that "annual vaccination*

is the currently accepted practice in Australia". This practice continues despite the fact that, in a previous draft vaccination policy published ten years ago, the AVA acknowledged that "the duration of immunity delivered by some immunobiologics and against some diseases may be variable".

What are the ethical and legal implications if vets continue to insist their clients unnecessarily revaccinate their dogs annually *or* triennially with core MLV vaccines? These recommendations are not evidence-based. It is not ethical practice to urge clients to have medical interventions for their pets that are not needed and which may cause harm – Ronald Schultz calls this "an unacceptable medical procedure".

After persistent lobbying by a group of concerned pet owners, the President of the Australian Veterinary Association, Dr Mark Lawrie, advised: *"We are reviewing the AVA policy, and it may be that the new one will contain similar guidelines as those in the World Small Animal Veterinary Association Guidelines for the Vaccination of Dogs and Cats"*. Subsequent advice indicates the new vaccination policy is due to go to the AVA Board for ratification within the next month or so. The AVA has advised that "once it becomes official policy, we will implement a communication strategy to inform veterinarians and the public that our policy has changed".

Why has it taken the AVA ten years to address this problem? Who knows how many people's pets may have been adversely affected over the past years of inaction, particularly if vets are reluctant to report possible adverse reactions?

Will the new AVA vaccination policy stipulate that pet owners must be given the latest scientific information on long duration of immunity, and possible adverse reactions to vaccination? *Surely there should be full disclosure of these important facts to give clients the opportunity to make their own "informed decision" before deciding whether or not to revaccinate their pets?* A consent form listing these important points should be understood and signed by the client before revaccination takes place.

Will the AVA make a commitment to keep abreast of new developments in immunology to ensure the most effective and safest vaccination methods are used? How will the new vaccination policy be regulated, particularly as only 50% of vets in Australia are members of the AVA, *and there is currently no effective government regulation of the veterinary profession?*

The federal government regulator, the Australian Pesticides and Veterinary Medicines Authority, also has to act on this problem. The APVMA has repeatedly been asked to provide evidence to support vaccine product label revaccination recommendations, *but has refused to respond to these requests*. According to international immunology experts, there is *no* scientific evidence to back revaccination recommendations on MLV vaccine product labels, so why have these false and misleading claims been allowed to pass through the regulatory

process? It is interesting to note that most of the APVMA's operational income is collected from registrants of pesticides and veterinary medicines – is there a conflict of interest here?

In response to pet owners' concerns, the Australian Pesticides and Veterinary Medicines Authority convened a meeting of senior scientific staff to discuss the problem of over-vaccination on 15 April 2009. The APVMA has advised they are preparing a "position statement" on the subject of pet vaccination. It is not known when this position statement will be made available to the public.

The Australian Veterinary Association and the Australian Pesticides and Veterinary Medicines Authority have dragged their heels on this issue for far too long. There is a serious problem in that unproven vaccine product label revaccination recommendations are conflicting with published scientific information on duration of immunity and adverse reactions. This ambiguity has to be acknowledged and addressed. *Somebody has to take responsibility to coordinate a solution to this problem*.

Professional conduct and self-regulation in the veterinary profession must also come under scrutiny. Jane Hern, Registrar of the Royal College of Veterinary Surgeons in the UK, notes that professional bodies are granted the privilege of self-regulation, but only in return for an assurance their members set standards of competence and ethical behaviour to protect consumers. *Who protects the consumer when the veterinary profession's "standards of competence and ethical behaviour" are putting pets needlessly at risk?* By allowing over-vaccination to continue, the veterinary profession has failed in its duty to protect the rights of pet owners and the health of their pets.

Pet owners are being exploited by those veterinarians who send unsolicited reminder letters manipulating their clients into having unnecessary and possibly harmful interventions for their pets. The government regulator, the APVMA, has been complicit in this practice by allowing vaccine products with unsubstantiated revaccination recommendations on the market.

There is a total lack of effective regulation, transparency and accountability, and this raises serious questions about the efficacy and safety of other possibly harmful products that are routinely pushed by vets.

Over-vaccination puts pets needlessly at risk – it's time someone sounded the alarm.

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This article is based on my paper *"Over-vaccination of pets – an unethical practice"* which includes more detail and references on this subject. The paper is freely available at:

http://users.on.net/~peter.hart/Over-vaccination_of_pets_-_an_unethical_practice.pdf