



The NLRC was organized in 1996 with the idea of creating a national club that would preserve and promote the Labrador Retriever. Everyone in the Labrador community is welcome...from pet owners to old timers.

We are a National Lab Club formed by the members, for the members, working together for the preservation, betterment and service to the Labrador Retriever.

THE LABRADOR CONNECTION

JULY 2018 ELECTRONIC EDITION

Inside this issue...

Vaccine Issues and WSAVA Guidelines	1
WSAVA Guidelines	2
Vaccine Benefits	
WSAVA Guidelines	3
Vaccine Timing	
WSAVA Guidelines	6
Exposure and Protection	
NLRC Membership	10
New Memberships & Renewals for 2018	
NRLC Donations	11
"Year of the Rescue"	
NLRC	12
Board Members & Committee Chairs	

Vaccine Issues & WSAVA Guidelines

by Dr. Jean Dodds

Dr. Jean Dodds is considered one of the foremost experts in pet healthcare. Dr. Dodds focuses on vaccination protocols, thyroid issues and nutrition. She recently gave two lectures on vaccine issues and guidelines for veterinarians in Israel for which she thanks: BioGal Galed Laboratories and the Israel Veterinary Medical Association for the opportunity to have done so.



World Small Animal Veterinary Association (WSAVA) vaccine guidelines for dogs in cats began in 2006. These guidelines and others, such as those of the American Animal Hospital Association (AAHA), American Veterinary medical Association (AVMA), American Association of Feline Practitioners (AAFP), and British Association of Homeopathic Veterinary Surgeons (BAHVS) in the United Kingdom are each gradually changing routine vaccination practice worldwide.

Guidelines help ensure that pet owners and breeders have scientifically-based advice, and robust, safer vaccines and vaccination protocols for dogs and cats.

2003 AAHA Summarized Comments on Vaccine Policy include:

- "No vaccine is always safe, no vaccine is always protective and no vaccine is always indicated."
- "Misunderstanding, misinformation and the conservative nature of our profession have largely slowed adoption of protocols advocating decreased frequency of vaccination."
- "Immunological memory provides durations of immunity for core infectious diseases that far exceed the traditional recommendations for annual vaccination. This is supported by a growing body of veterinary information as well as well-developed epidemiological vigilance in human medicine that indicates immunity induced by vaccination is extremely long lasting and, in most cases, lifelong."

The above three bulleted points still apply today

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Vaccine Issues Dr. Dodds (continued from page one)

WSAVA 2015 - 2017 from Professor Michael J. Day

- “Vaccination should be just one part of a holistic preventive healthcare program for pets that is most simply delivered within the framework of an annual health check consultation.”
- “Vaccination is an act of veterinary science that should be considered as individualized medicine, tailored for the needs of the individual pet, and delivered as one part of a preventive medicine program in an annual health check visit.”

Key Points on Vaccine Issues

- Modern vaccine technology has afforded effective protection of companion animals against serious infectious diseases.
- But, this advancement brings an increased risk of adverse reactions. (vaccinosis).
 - Some [adverse reactions] are serious, chronically debilitating and even fatal.
 - Must balance this benefit/risk equation = more benefit than risk.
 - “Be wise and immunize, but immunize wisely!” (Dr. Ron Schultz).

Benefits of Vaccines

- More lives saved, more animal production safeguarded than any other medical advance.
- Eradicated smallpox; nearly all polio and measles in people.
- First vaccines were against small pox, anthrax, and canine distemper.
- Significantly reduced endemics of canine distemper, hepatitis and parvovirus, but not in wild-life reservoirs.
- Significantly reduced endemic feline panleukopenia (a parvovirus).
- Eliminated rabies in Europe; eradicated Rhinderpest in Africa; and foot & mouth disease in Europe.

Vaccine Non-Responders [does not develop protective antibodies after vaccination]

- Genetic trait: do NOT breed them
- Non-responders will remain susceptible to the disease lifelong.
- Non-responder rate = 1:1000 for CPV (parvovirus) especially black Labradors & Akitas
- Non-responder rate = 1:5000 for CDV (distemper virus) especially Greyhounds
- Non-responder rate = 1:100,000 for CAV (hepatitis, adenovirus) (continued next page)

Vaccine Issues Dr. Dodds (continued from previous page)

The non-responder rate for vaccines is unknown for cats.

Adverse Reactions & Cautions: Canine Distemper Virus

- Rate = 1:100,000 for Rockborn & Snyder Hill vaccine strains
- Rockborn strain CDV found in most of today's MLV (modified live virus) vaccines
- Produces PVE (post-vaccinal encephalitis) blindness & death
- Recombinant (rCDV) Recombitek (Merial) cannot cause PVE
- Rate = 1:500,000 for Onderstepoort strain, but less potent
- When MLV CDV combined with adenovirus (Hepatitis) in combo, risk of immune suppression and PVE increases, especially in puppies.

Maternal Immunity & Protection: Milk Replacer

- Feeding milk replacer proteins instead of natural colostrum will coat bowel of newborns and shut down absorption of antibodies needed for protection from disease.
- Give FFP (Fresh-Frozen Plasma) immediately to orphan or weak pups to get passive immunity; then add milk replacer.

Maternal Immunity & Protection: Vaccine Timing

- Last puppy vaccine at 16-18 weeks for protection

New WSAVA Guidelines for Puppies

- About 10% of puppies fail to respond to a primary "core" vaccine when the last one is given at 12 weeks of age because:

⇒ They have persistent blocking maternally derived antibodies (MDA)

- New recommendations for primary core vaccines are:

1st vaccine at 8-9 weeks of age

2nd vaccine 3-4 weeks later

3rd vaccine at 16 weeks of age or older

4th and Last in the series of core vaccines should be given at 6 months of age.

(Previously the 4th core vaccine was given at 12 months of age or 12 months after completion of the primary vaccine series.

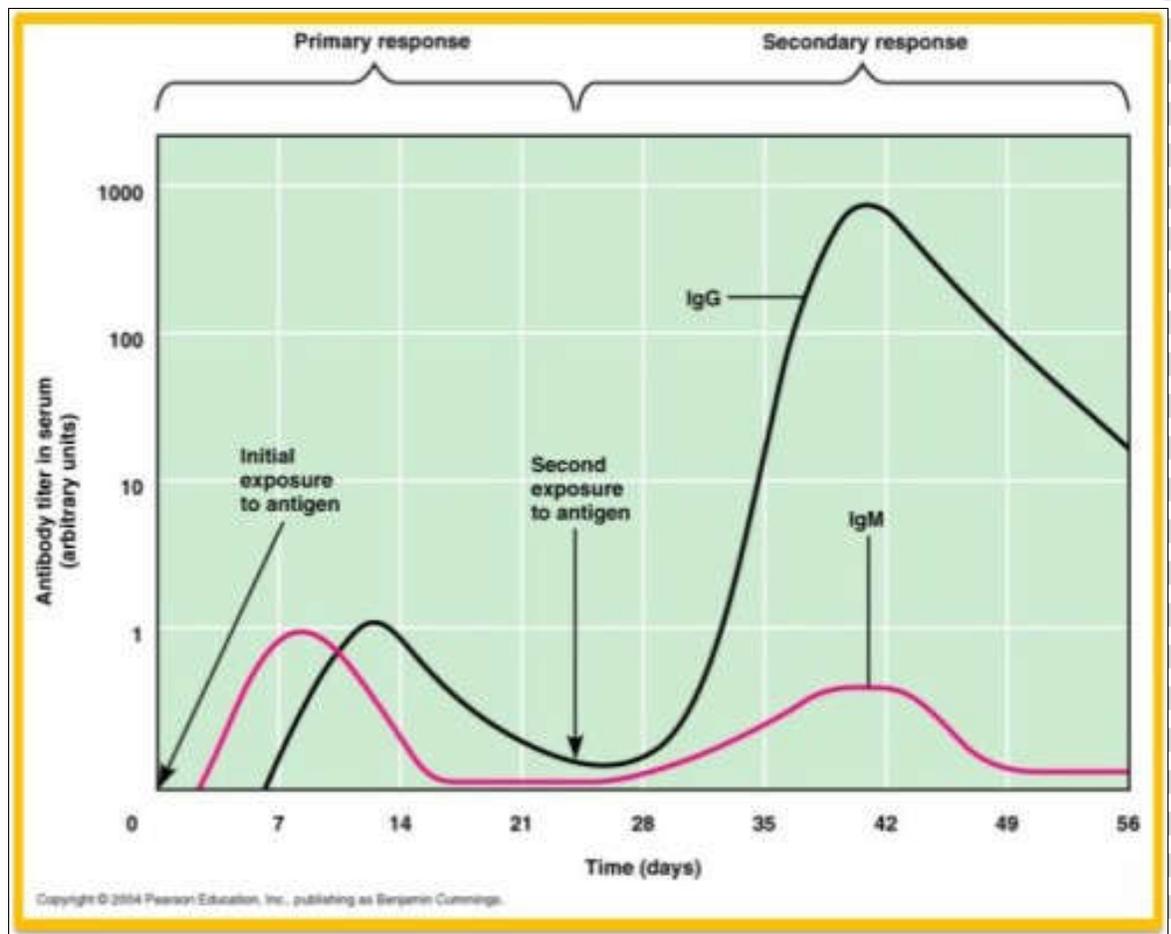
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Vaccine Issues Dr. Dodds (continued from previous page)

New WSAVA Guidelines for Puppies (continued from previous page)

- Vaccines can be given at time of neutering, or better, at suture removal after neutering.
 - Those given 6-month core vaccines do not need one at 12 months of age.
 - Alternately, serologically test core vaccinal immunity at 6 months of age.
- ⇒ Seropositivity reflects an endogenous immune response; the animal is protected.
- ⇒ Protection is assured based upon serum titer levels, no matter how high the titer for CDV, CPV, CAV-2 and FPV.
- ⇒ ANY measureable serum titer level = committed immune memory cell immunity.

Anamnestic Immune Response Chart



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Vaccine Issues Dr. Dodds (continued from previous page)

New WSAVA Guidelines for Adult Dogs - Booster Vaccines

- Core vaccines should be given to all adults, but not more often than every three years.
- Serological and challenge studies indicate that protection is likely must longer (7-9 years)
- Core and non-core revaccination needs of adults should consider that animal's risk of exposure.
- Geographical location and lifestyle factors should be taken into account.

New WSAVA Guidelines for Adult Dogs - Vaccinating pregnant Pets

- Vaccines should not be given during pregnancy
- Vaccination with MLV and killed products during pregnancy should be avoided. The same applies to times of sex hormonal changes, ie: estrus and pro-estrus.
- Shelters may advise vaccination, if pregnant animal was never vaccinated and there is an outbreak of disease.

Beyond the Guidelines - Vaccine Dosage comments

- Body Mass: The same dose is intended for toy and giant breeds.
- ⇒ Why? Modified Live Virus (MLV) vaccines (ie: distemper, parvovirus, adenovirus-2) immunogenic effect not based on body mass. Killed, inactivated vaccines (ie: rabies) should be adjusted for body mass. Minimum/optimum doses for protection are? Excess antigen present.
- ⇒ Half-dose CDV & CPV Vaccine Study in Small Breed Adult dogs between 3-9 years studied. Dogs were healthy; had no vaccines for at least 3 yrs. Purpose was to determine if just a half Dose of bivalent Canine Distemper Virus (CDV) & Canine Parvovirus CPV) MLV vaccines Elicited protective serum antibody titer responses. Titer levels compared pre-vaccine and with 1 & 6 months post-vaccine. The half-dose Vaccine resulted in sustained protective serum antibody titers for all adult dogs studied. (this finding refutes the statement about reduced volume based upon pet size from the WSAVA 2016 Guidelines).
- Optimal age for full immune response is 12+ weeks for puppies: is it the same for all breeds and sizes? Earliest age for safety is 6 weeks for puppies.
- Effective age varies.

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Vaccine Issues Dr. Dodds (continued from previous page)

Beyond the Guidelines - Vaccine Dosage comments continued

- Maternally derived antibodies (MDA) interfere with complete immunization - current potent vaccines produce longer lasting, passive colostral immunity.
- Dr. Schultz advocates giving one monovalent canine parvovirus vaccine at 18 weeks (as break-through disease has occurred).
- Avoid Vaccinations: 30-45 days before estrus, during estrus, pregnancy and lactation.

Core Vaccines - Dog

- Distemper, Parvovirus, Rabies, Adenovirus-2 for Infectious Canine Hepatitis cross-protection (in Areas where prevalent).

Why Give "Core" Vaccines Annually?

Booster after puppy series (3-4 doses beginning at 6-8 weeks, repeated every 2-4 weeks until 16 weeks) can be given at 6 months and/or 12 months of age.

Alternatively, test serum vaccine antibody titer instead of 6 or 12 month booster.

After that, "core" vaccines are labeled and intended to be given to adults not more often than every three years. Giving adult boosters more often will not increase amount of protection, more often introduces unnecessary vaccinal antigens and excipients and increases risk of adverse events (vaccinosis). For Canine Distemper, Canine Adenovirus, Canine Parvovirus; true immunization creates "sterile immunity" so the animals cannot be re-infected.

No evidence that annual boosters are necessary; except in rabies endemics.

Need to lengthen interval for "core" vaccines to every 3-7 years or more for healthy adults. Geriatric animals vaccinated only with caution. Monitor serum antibody titers instead of vaccinating.

Vaccination, Exposure & Protection

CDV (Distemper virus): vaccinates immediately protected, if exposed simultaneously. MLV CDV does not shed appreciably.

CPV (Parvovirus): vaccinates protected after 48-72 hours; exposed pups get sick. MLV CPV sheds from post-vaccine days 3-14 which is an exposure risk. Shed vaccine CPV is not seen on Idexx SNAP test, but is present on CPV PCR of feces for 2 weeks.

Infectious Canine Hepatitis (CAV-1) clinical cases not in America for about 15 years, save for one exception. No vaccine for CAV-1 as adverse "blue eye" developed;

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Vaccine Issues Dr. Dodds (continued from previous page)

CAV-2 vaccine for kennel cough cross-reacts. But, giving puppies CAV-2 vaccine with CDV and CPV for distemper & parvovirus increases risk for PVE (post-vaccinal encephalitis, blindness & death). Can give Bordetella oral/intranasal to provide some hepatitis CAV-2 protection. Adenovirus-2 vaccine is not preferred despite listed in the "core."

Oral/intranasal Bordetella vaccines releases interferon, which impairs growth of other respiratory viruses. Injectable bordetella vaccine does not release interferon. Oral Bordetella vaccine preferred; hypersensitivity reactions with intranasal. Kennel cough vaccines are not 100% effective.

Influenza vaccines: mild clinical signs; many exposed dogs remain clinically normal. Produces fever whereas kennel cough does not. When influenza is combined with Streptococcus, 2-3% can die.

The best way to clinically distinguish canine influenza from kennel cough:

- Kennel Cough typically does not produce a fever unless it subsequently leads to pneumonia in debilitated dogs.
 - Canine Flu usually presents as a fever with a cough in the early stages. For mild fever 102-103F no treatment is necessary. If above 104F, then secondary pneumonia can result and should be treated promptly with antibiotics and supportive care.
 - Do not routinely give canine influenza vaccines to healthy pups or adult dogs.
 - Canine flu viruses (H3N2 and H3N8) are highly contagious.

Leptospirosis is endemic in Israel (clinically rare) and many other parts of the world

- After initial 2-dose series, there is an ongoing debate over the need for annual Lepto boosters as duration of immunity is short-lived.
- Concerns over drift in serovars now affecting dogs, raising further questions for current use of Lepto bacterins.
- Current vaccines only cover 2 or 4 clinically significant serovars out of 7.
- Most common vaccine eliciting acute and per-acute adverse reactions. Disease exposure risk vs adverse vaccine reaction and benefits needs to be taken into account. Vaccine not very effective.
- Treatment with antibiotics effective; sanitation and hygiene very important along with controlling rodents.

CME (Canine Monocytic Ehrlichiosis) major, potentially fatal, tick-borne disease caused by Ehrlichia canis is prevalent worldwide, including Israel.

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Vaccine Issues Dr. Dodds (continued from previous page)

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Kennel Cough & Flu Vaccines -

Oral/Intranasal Bordetella

- Releases interferon, which impairs growth of other respiratory viruses (parainfluenza, adenovirus-2, influenza).
- Injectable Bordetella vaccine does not release interferon.
- Oral preferred; hypersensitivity reactions with intranasal.
- Kennel cough vaccines not 100% effective.

Influenza

- Mild clinical signs; many exposed dogs remain clinically normal.
- Produces fever whereas kennel cough does not. When influenza is combined with Streptococcus, 2-3% can die.

Best way to clinically distinguish canine influenza from kennel cough:

- Kennel Cough typically does not produce a fever unless it subsequently leads to pneumonia in debilitated dogs.
- Canine Flu usually presents as a fever with a cough in the early stages. For mild fever (102-103F) no treatment is needed. If above 104F, then secondary pneumonia can result and should be treated promptly with antibiotics and supportive care.
We do not routinely give canine influenza vaccines to healthy pups or adult dogs.
- Even though canine flu viruses (H3N2 & H3N8) are highly contagious.

Alternatives to Current Vaccine Practices

- Measure serum antibody titers
- Avoid unnecessary vaccines or over-vaccinating
- Caution vaccinating sick or febrile animals
- Tailor specific minimal vaccine protocol for dogs or families at risk for adverse reactions.
- Start core vaccination series later (9-10 weeks for dogs)

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Vaccine Issues Dr. Dodds (continued from previous page)

- Alert caregiver to watch puppy behavior and health after boosters
- Avoid revaccination of those with prior adverse events
- After the core puppy vaccine series

Measure serum antibody titers 3-4 weeks later for dogs (CDV, CPV & optionally CAV-2) to determine if 26 week booster is needed. At 52 weeks, measure serum antibody titers again or give booster.

Reasons for vaccine titer testing? To determine that animal is protected (by a positive result)

To identify a susceptible animal (by a negative result). To determine whether an animal has

Responded to a vaccine. To determine whether a specific vaccine is effectively immunizing.

Case Examples of Vaccinosis

- Acute & Subacute reactions - anaphylaxis and anaphylactoid - occur minutes to several days post vaccination; can be severe and even fatal.
- Delayed and chronic reactions - usually occur 5-21 days post-vaccination; peak time is 10-14 days. Can be delayed longer, even months with rabies vaccines.
- Clinical signs vary from seizures, immune-mediated damage of blood and other tissues/organs, even death.

Factors increasing risk of adverse events 3 days after vaccination:

- Young adult age
- Small-breed size
- Neutering
- Multiple vaccines given per visit
- These risks should be communicated to clients

Adverse reactions to rabies vaccines:

- More hypersensitivity cases reported than before
- Stated more common in toy breeds, especially poodles
- Likely genetic predisposition
- Dominant antigen cause = reactions to bovine serum albumin (BSA)
- Manufacturers reducing BSA in animal vaccines.

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Vaccine Issues Dr. Dodds (continued from previous page)

Rabies Vaccine alternative: Thimerosal (Mercury) free Rabies Vaccines.

Rabies Challenge Study Update

The Rabies Challenge Fund research studies are now at years 7 and 8; the 5 year challenge phase results: The USDA's rabies challenge virus was given to dogs. Post-challenge results after 6 weeks met US Title 9 Code of the Federal Regulations (CFR) for rabies vaccine licensing. Dogs survived live rabies virus challenge 5 years after receiving two rabies vaccines as puppies. Unvaccinated control dogs were humanely euthanized once they showed very early clinical signs of rabies. Serum samples collected yearly are being assayed with rabies serum virus neutralization and memory cell immunity tests.

Rabies remains a serious and almost always fatal disease in many countries including the recent outbreaks in Israel. No documented cases of rabies in North America in vaccinated, truly immunized dogs for 2 decades.

Please feel
free to forward
our
newsletter to
interested
family and
friends

NLRC Membership -- Open Enrollment

Membership in the National Labrador Retriever Club, Inc. is open to all Labrador enthusiasts; however, to join you must be in good standing with the American Kennel Club, Inc. and should consider the guidelines set forth in the [NLRC Code of Ethics](#) when engaged in any activities involving the breeding, exhibiting and selling of Labrador Retrievers.

Two types of annual individual memberships are offered:

Full (voting member)	\$30
Associate (non-voting)	\$20

Click the below links for NLRC Membership forms:

[NLRC Membership Application Form \(that can be printed and mailed in with your membership fee\)](#)

Or to both apply and pay online

[NLRC Membership Application](#)

Are you listed in our [NLRC Breeders Directory](#)?

NLRC Members with full

membership rights can apply to participate on the NLRC website Breeder Directory by completing the applicable section on the PDF membership application and submitting a \$10 fee.

Any questions? Contact our Interim Membership Chair:
Sandra Underhill
Sandy@LabsToLove.com

We Support Studies and Grants that benefit the Labrador Retriever

Visit the [National Labrador Retriever Club](#)

New Members Welcomed

Apply Online Today

National Labrador Retriever Club, Inc. Donations

This was the Year of the Labrador Rescue when it came time to make donations for 2018!

We hoped our donations would make the biggest impact on our beloved Labrador Retrievers if we sent help directly to the most needy Labrador Retriever rescue organizations; we selected three Labrador Rescues to receive much needed funds as well as forwarding funds to a national club's Labrador Retriever Rescue, the LRCP.

If any member knows of a Labrador rescue that you feel deserves our help, email us with your suggestions! We welcome your input!

A donation was also sent to the AKC Canine Health Foundation to fund Labrador Retriever specific grants that support research and education that helps Labrador Retrievers and their human companions live longer, healthier lives. A donation to the AKCCHF helps with Labrador Retriever health research and education programs that deliver new treatments, technologies and therapies for the Labrador Retrievers of today, and for the Labrador Retrievers of tomorrow.





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The National Labrador Retriever Club, Inc. exists for the protection and betterment of the breed, to encourage education of the general public who may want to add a Labrador to their family and to meet a social responsibility to its members, the general public, and the Labrador world in particular. To this end, we adopted a [Code of Ethics](#) to serve as a guide.

Our Newsletter, The Labrador Connection, is published by the club periodically when sufficient material is received. The Labrador Connection's newest electronic issue is emailed to members when it is published and all issues may be viewed online at any time.

Visit our website online at www.NationalLabradorRetrieverClub.com

