VACCINES

How often should I vaccinate? Which vaccines should I use? How safe are vaccines? Does my pet really need vaccines? Your confusion is understandable. It used to be that we all knew exactly what to do -- vaccinate yearly for any diseases for which there was an available vaccine. But times have changed, and so too should have your veterinarian's recommendations.

Problems with vaccines - why not just vaccinate?

Vaccination can very commonly cause mild side effects: fever, lethargy, poor appetite, painful muscles, and vomiting. These side effects are usually not a major cause for concern, although they might still necessitate a visit to the veterinarian. Of more concern are the suspected possible deeper effects on the immune system in some pets: aggravations of allergies, auto-immune diseases such as thrombocytopenia (IMT) and hemolytic anemia (IMHA), encephalitis, seizures, polyneuropathy (inflammation of the nerves), polyarthritis (inflammation of the joints), thyroid issues, kidney issues, or worsening of any chronic health problems. Vaccination in cats is proven to come with some risk of developing very aggressive cancer at the injection site. In the big picture, it is possible that over-vaccination can contribute to ill-health rather than promote health.

The original guideline of yearly vaccination for most diseases was based on "duration of immunity" studies by the vaccine companies. The costs of a year-long study are quite high. Multiply that for every extra year one wants to study how long a vaccine might last. You can see how the vaccine companies were happy to provide proof of duration of immunity for just the one year to qualify for the vaccine license. How much incentive was there to prove that a vaccine lasted for more than one year?

Enter the increased awareness of possible side effects of vaccines and the interest in avoiding over-vaccination. Now that there is a consumer demand for less vaccination, there is money to be made in providing a vaccine that lasts longer than another vaccine. So now we have some vaccines that have proven duration of immunity of 3 years. But how long might this immunity really last?

How long do vaccines last?

We still do not have all the answers here, but some suspect that after a few boosters, the important vaccines might last a lifetime. Studies performed by Dr. Ronald Schultz show that Distemper vaccine lasts at a minimum 3-15 years, depending upon the strain, Parvovirus and Adenovirus hepatitis vaccines last at least 7-9 years, Rabies at least 3-7 years, Parainfluenza at least 3 years, Bordatella 9 months, Lyme 1 year. Please notice that these times are the minimum, as longer studies have yet to be done. Viral diseases (Distemper, Parvovirus) tend to have much longer immunity than bacterial diseases (Lyme, Bordatella). You can learn more by going to www.sciencedirect and searching for Ronald Schultz.

Some words about Rabies vaccination

The Rabies vaccine is proven and licensed to last 3 years, but some cities and counties still require yearly boosters. A study by Dr. Ronald Schultz suggests that the vaccine might last as long as 7-9 years. I would like to put in a plug here for Dr. Jean Dodd's Rabies Challenge Fund. She is part of a project with Dr. Schultz and others to license the Rabies vaccine for 5- 9 years. As the study is not funded by a vaccine manufacturer, the project is looking for donations to continue the duration of immunity for the full 9 years. If you would like to consider a donation, or just want more information, check out the website at www.rabieschallengefund.org .

Using titers to determine immunity

When the body is vaccinated for most types of diseases (or naturally exposed) antibodies are produced. These antibodies can be measured as titers and are used to evaluate the immune response and assumed level of protection. But some diseases (FIP, FeLV, FIV, HIV) are not overcome by antibodies, so titer levels for these particular diseases do not reflect protection, only exposure.

On the other side of the coin, a lack of antibodies does not necessarily mean that the body is no longer protected against that disease. Antibody levels do tend to diminish over time, sometimes to low or undetectable levels. But the immune cells that make those antibodies might still be present and ready to respond to the disease if needed.

What we are left with is that titers *suggest* immunity for *most* diseases, but we are not guaranteed this is the case. For the most part, the use of titers within a certain range may be used to guide vaccination and boosters; if a titer is within a "protective" range as determined by a laboratory, then a booster is not needed. If titers are low, then a booster *might or might not* be needed. Titers are not used to determine the need to vaccinate for FeLV or FIV.

An important point is that Rabies titers are not recognized for legal purposes. If your unvaccinated animal bites a human or is bitten by a rabid animal, a Rabies titer might not help you. In the worst case scenario, euthanasia might be demanded in order to test for Rabies.

Which vaccines should you give?

The answer to that question depends upon risk of exposure, efficacy of the vaccine, danger of the disease, and risk of possible side effects. The newest approach is to custom design a vaccine protocol for each individual pet based on the pet's health, age, and risk of exposure.

The American Animal Hospital Association (AAHA) and the American Association of Feline Practitioners (AAFP) designed guidelines based on the concept of "core' and "non-core" vaccines. "Core" vaccines would be those which should be given to every pet." Non-core" vaccines are given only to select populations at risk for that disease.

Core vaccines

For dogs: Distemper, hepatitis/Adenovirus, Parvovirus (DHP), Rabies

For cats: Feline Viral Rhino (Herpes), Calicivirus, Panleukopenia (FRVCP), Rabies

Noncore: Parainfluenza, Leptospirosis, Bordatella, Corona, rattlesnake and Lyme for dogs; FIV, FeLV, and Chlamydia for cats. These would be given only to pets under certain circumstances; discuss with your veterinarian or do your own research.

Not recommended: Giardia, FIP, dental disease

Who should be vaccinated?

Puppies & kittens should wait until their immune systems are mature enough to respond (8-12 weeks of age depending upon differing opinions). Most sources

recommend boostering one year later, as immature immune systems might not build life-long immunity to the initial puppy/kitten series; this gives a greater chance for long-lasting immunity. Only healthy animals should be vaccinated, not ill animals. Boosters might be considered when titers are low. Contraindications for vaccination would include: Fever, allergy outbreak, recent accident, trauma, emotional trauma (such as a move or death in the family), history of auto-immune disease, current or recent cancer (or maybe even any history of cancer). Vaccines are generally not recommended for geriatric pets.

Does your pet need vaccines at all?

Of course, conventional veterinarians and most people would answer "yes" without thinking much about it. A few others would say no, never. As with most things, I believe that the truth lies somewhere in between. There are deadly diseases out there (Parvovirus, Distemper, and Panleukopenia in the young, Leptospirosis in adults) which can be prevented or minimized by vaccination. This is why I recommend judiciously and selectively vaccinating puppies and kittens for deadly diseases if there is risk of exposure.

What about nosodes?

Admittedly, I do not have personal experience using nosodes as an alternative to vaccination. But my understanding of the classical homeopathic use of nosodes is to *treat* disease, not prevent it. The argument that nosodes prevent disease might be based more accurately on the observation that the *disease was treated* as the patient was in the process of acquiring the disease, not that it prevented the disease. Nosodes have been shown to be of benefit in protecting against disease *in the midst of an outbreak* (i.e. *during* the time of exposure). But the only study that I can find with nosodes given *prior* to exposure (for Parvovirus) showed no efficacy. I would recommend doing research into the theory and background of nosodes before using them as a sole method of disease protection.

Final recommendations

Ultimately the choice of who, when, and what to vaccinate is between you and your veterinarian. My suggestion is to research the risks and benefits of vaccination for each disease. Dr. Jean Dodds recommends postponing most vaccines until the immune system is a little more mature. A custom-tailored

approach is, in the end, the only way to go, but here are some basic suggestions:

Dogs

DHPP at 9-10 weeks of age & 14-16 weeks, booster Distemper/Parvo at 1 year, titer thereafter. By waiting this long to start the vaccination, there is a risk of contracting Parvovirus. It becomes your responsibility to prevent exposure prior to 16 weeks of age by keeping your puppy at home (not on the sidewalk, not where another dog with Parvovirus has been).

Rabies at 20-24 weeks if possible (the law might require earlier). Booster as required by law, usually at 1 year and then every 3 years thereafter. A veterinarian can write a medical exemption for pets which would be harmed by vaccination, but this will not legally protect you if your pet bites a human or is exposed to a rabid animal.

Separate all vaccines by at least 2-3 weeks, meaning do not give DHPP & Rabies (or any other vaccine) together.

My additional suggestions based on experience in the Monterey Bay area:

Leptospirosis with any vaccine with the newer serovars IF dogs are outdoors and near water or livestock; this vaccine might need to be repeated every 6 months. We saw a few cases every year at the emergency clinic in Monterey, and these dogs can die quickly of kidney or liver failure.

Rattlesnake vaccine if around snakes (Ft. Ord, Carmel Valley). Antivenin is currently $800 a vial, and is often not even available.

Skip the Lyme vaccine if in the Monterey Bay area and not traveling to Lyme endemic areas, as the disease not prevalent here (but is prevalent north of San Francisco). Check CDC (Center for Disease Control) charts/maps for your area.

Cats

FVRCP at 8 & 12 weeks; booster at 1 year; then never again. There is a risk of acquiring Herpes or Calicivirus, but this will manifest as a cold, which most adult cats can handle easily. Titers are available, and might be considered if your cat must be boarded.

Rabies if outdoors in Rabies endemic areas - use the yearly nonadjuvanted vaccine to minimize cancers at the injection site.

Separate all vaccines by at least 2-3 weeks, meaning do not give FVRCP and Rabies (or any other vaccine) at the same time

Consider homeopathic remedies after vaccination

Many people opt to use homeopathic remedies to help minimize the negative side effects of vaccination (vaccinosis). Consider Nux Vomica (for any vaccine) or Lyssin (for Rabies). Various protocols are available.