

Puppy Vaccinations
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When should puppies be vaccinated?

The length and timing of the window of susceptibility is different in every litter, and even between individuals in a litter. A study of a cross section of different puppies showed that the age at which they were able to respond to a vaccine and develop protection (become immunized) covered a wide period of time. At six weeks of age 25% of the puppies could be immunized. At 9 weeks 40% of the puppies were able to respond to the vaccine. The number increased to 60% by 16 weeks, and by 18 weeks 95 % of the puppies could be immunized.

Almost all researchers agree that for puppies and kittens we need to give at least three combination vaccinations and repeat these at one year of age.

Drs. Foster and Smith prefer to vaccinate puppies with a combination vaccine at six weeks of age initially, with boosters given every three weeks until the puppy is about sixteen weeks of age. We feel that this schedule will help protect the widest range of dogs. We realize that with our protocol we will be vaccinating some dogs that are not capable of responding and we will be revaccinating some dogs that have already responded and developed a protection. But without doing an individual test on each puppy, it is impossible to determine when the puppy's immune system will be best able to respond. We also realize that in the face of an infection, due to the window of susceptibility some litters will contract a disease (e.g., parvo) despite being vaccinated. By using quality vaccines and an aggressive vaccination protocol we can make this window of susceptibility as small as possible. Our vaccination protocol may not be right for every puppy. Puppies that are not exposed to other dogs and have a very small chance of coming in contact with parvovirus may not need to be vaccinated as frequently. At the same time some 'high risk' puppies may need a more intense and aggressive vaccination program. It is best to work with your veterinarian on a vaccination protocol that is best for your individual puppy or kennel, taking into consideration your individual situation.

Against which diseases should puppies be vaccinated?

Experts generally agree that the core vaccines for dogs include distemper, canine adenovirus-2 (hepatitis and respiratory disease) and canine parvovirus-2. Some would say vaccines to protect against leptospirosis and coronavirus should also be considered "core" vaccines.

Noncore vaccines include canine parainfluenza and *Bordetella bronchiseptica* (both are causes of "kennel cough"), *Borrelia burgdorferi* (causes Lyme Disease), and for some veterinarians, coronavirus and *Leptospira*. Again, consult with your veterinarian to select the proper vaccines for your puppy.

A possible vaccination schedule for the "average" dog is shown below.

Age	Vaccinate for:
5 weeks	Parvovirus
6 weeks	Combination vaccine* without leptospirosis
9 weeks	Combination vaccine* without leptospirosis
12 weeks	Combination vaccine*
15 weeks	Combination vaccine*
1 year	Combination vaccine*
2 years	Combination vaccine*

*A combination vaccine includes adenovirus cough and hepatitis (the inclusion of either adenovirus-1 or

adenovirus-2 in a vaccine will protect against both diseases), distemper, parainfluenza and parvovirus. Some combination vaccines also protect against leptospirosis. Leptospirosis is a relatively rare disease that affects few dogs. Today, most people give combination vaccines without leptospirosis to puppies (those under 12 weeks of age). In the latter portion of the puppy's vaccination schedule, vaccines with leptospirosis can be used to protect against this disease. Consult with your veterinarian to determine what will be best for your puppy.

- Rabies vaccination should be given by your veterinarian according to local law.
- Where coronavirus is a concern, vaccinate at 6, 9, 12 and 15 weeks. Some combination vaccines contain coronavirus.
- Where Lyme disease is a problem, or if the animal is traveling to an area where Lyme disease occurs, vaccinate at 12 and 15 weeks and then yearly.
- For complete canine cough protection, we recommend Intra-Trac II ADT. For those who show, field trial, or board their dogs, we recommend re-vaccinating every 6 months with Intra-Trac II ADT.

The above recommendations apply to "most" puppies. Consult your veterinarian as to which vaccines are appropriate for your puppy. Remember, recommendations vary depending on the age, breed, and health status of the puppy, the potential of the puppy to be exposed to the disease, the type of vaccine, and the geographical area where the puppy lives or may visit.

For more information contact your veterinarian.

Vaccine dose

It is NOT true that a small breed of puppy should receive a smaller vaccine dose than puppies of larger breeds. All puppies regardless of age, body weight, breed and gender are given the same vaccine dose. Vaccines are generally administered in one milliliter (cc) doses. Simply follow the manufacturer's recommendations. To administer a lesser vaccine amount than recommended will likely result in insufficient immunity.

Time to produce protection

Vaccines do not stimulate immunity immediately after they are administered. Once a vaccine is administered, the antigens must be recognized, responded to and remembered by the immune system. In most puppies disease protection doesn't begin until five days post vaccination. Full protection from a vaccine usually takes up to fourteen days. In some instances, two or more vaccinations several weeks apart must be given to achieve protection. In general, modified live vaccines and those vaccines administered intranasally provide the fastest protection.

Why do some vaccinated animals still get the disease?

It is a fact that in the USA today, literally hundreds and perhaps thousands of vaccinated dogs and cats are still contracting the diseases they were vaccinated against. Some term this "vaccine failure", although it is more likely a failure of the immune system to respond than a problem with the vaccine itself. Parvovirus is a serious case in point. How can a puppy get the disease and possibly die if it was vaccinated? Unfortunately, for some reason the vaccine did not stimulate the immune system enough to protect the puppy from disease. The reason may be interfering maternal antibodies, the vaccines themselves, the dog's own immune system, or genetics. By far the most common reason in puppies is interfering maternal antibodies.