

Vaccinations (immunizations) are recommended for all dogs and cats, whether they spend time out of doors or not.

### **What are vaccines?**

Vaccines are made of small amounts of weakened or dead portions of a bacteria or virus or other foreign substance such as a toxin. These portions are called antigens. Vaccines also contain additives for preservation or sterility or to improve effectiveness. The antigens in vaccines stimulate the immune system to create antibodies that prevent specific diseases.

### **What are the risks of vaccinations?**

Reactions are rare, but when they do occur, they are generally mild and short-lived. They include fever, poor appetite, poor energy or swelling at the injection site. Severe reactions are unusual. Rarely a pet will be allergic to a vaccine. Symptoms may include swelling, difficulty breathing or diarrhea. Very rarely (1 in 1,000-10,000), cats may develop a local cancer at the injection site or a type of anemia. Some pets with poor immune systems (e.g., due to an infection or cancer) may not be eligible for vaccinations. Most importantly, pets are far more likely to die from diseases than they are from vaccinations.

### **Why vaccinate my indoor pet?**

Your pet can accidentally get outside, sometimes through a door left open by a repairman or visitor, and then encounter other animals. He or she could end up in a shelter with many other pets. Occasionally, wildlife such as squirrels or raccoons get inside by coming through a doggie-door, down a chimney or through an attic. In addition, cats may contract feline herpesvirus at an early age or even while still in the womb.

### **What vaccines are most critical?**

Core vaccines: These are vaccines that all cats and dogs should receive because the diseases they prevent occur everywhere and are life-threatening. For dogs these are canine distemper, adenovirus, and parvovirus. For cats, these are feline parvovirus, calicivirus and herpesvirus.

Rabies: In most states, including Colorado, rabies vaccines are required for dogs and cats unless the veterinarian documents that the pet has a medical condition that would worsen due to the vaccination. Rabies vaccine is made from a dead virus so there is no chance of contracting rabies from the vaccine. If a dog, cat or ferret bites a human, it must be quarantined for 10 days regardless of its vaccination status. For more information, see <https://www.colorado.gov/pacific/cdphe/rabies>.

Non-core vaccines: These are vaccines that are recommended for dogs and cats who are at risk for contracting specific infections. Because any medication can cause unexpected reactions, it is important consider what nonessential vaccines might be important and even life-saving. Pets that have contact with kennels, grooming salons, common areas like dog parks, and wooded areas are generally at greater risk for certain infectious diseases. Vaccinations against canine influenza, kennel cough

(Bordetella and other viruses) and/or leptospirosis may be advised for dogs and feline immunodeficiency virus and leukemia virus for cats. You should discuss this with your veterinarian.

Vaccination frequency is variable and depends on your pet's age and on the type of vaccine. Most vaccinations in very young animals (6-12 weeks or younger) are less effective. There are blood tests available to test whether pets have persistent immunity to certain diseases from earlier vaccinations. However, these tests may be more expensive than the vaccinations and are not 100% accurate.

For a good discussion of pet vaccinations see [http://pets.webmd.com/features/pet\\_vaccination](http://pets.webmd.com/features/pet_vaccination). However, it was written in 2009 so the specific recommendations regarding some of the specific core vaccinations are out of date.

### **Other resources**

<http://www.wsava.org/sites/default/files/WSAVA%20Vaccination%20Guidelines%202015%20Full%20Version.pdf> 2016 World Small Animal Veterinary Association Vaccination Guidelines Group; Guidelines for Vaccination of Small Animal Pets

<https://www.asPCA.org/pet-care/general-pet-care/vaccinations-your-pet>

[https://www.aaha.org/public\\_documents/professional/guidelines/caninevaccineguidelines.pdf](https://www.aaha.org/public_documents/professional/guidelines/caninevaccineguidelines.pdf) 2011 American Animal Hospital Association; vaccination guidelines for dogs

<http://www.catvets.com/public/PDFs/PracticeGuidelines/VaccinationGLS.pdf> 2006 American Association of Feline Practitioners Feline Vaccine Advisory Panel Report; guidelines for cats

<http://pets.webmd.com/pet-vaccines-schedules-cats-dogs#1> Vaccination schedules from WebMD 2016